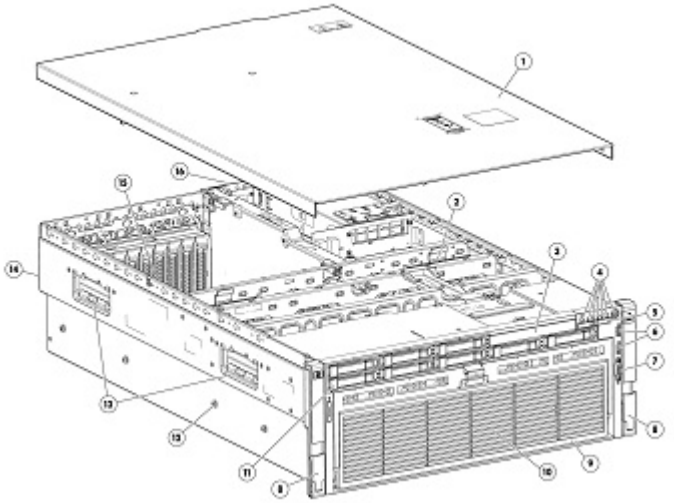
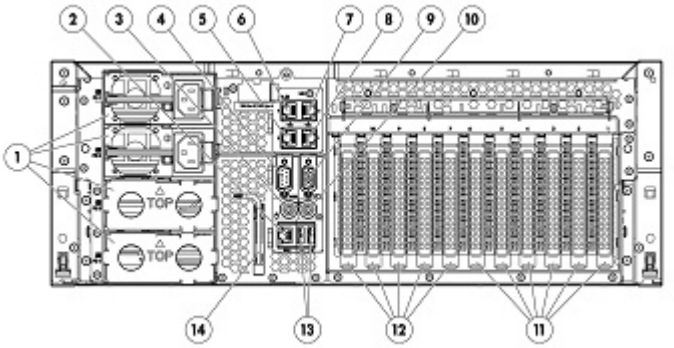
Overview

Powered by latest AMD Opteron® 8, 12 and 16 core processors, the HP ProLiant DL585 G7 is the most expandable 4P multi-core rack mount server ideal for server virtualization, server consolidation, multi-tiered enterprise application, and corporate infrastructure applications.





Front View:

1. Quick Removal Access Panel
2. 4 Hot Plug Redundant Fans Standard on all models
3. Slimline Drive (DVD Drive optional)
4. Front Panel LED Display and Power Button
5. Slide-out Systems Insight Display
6. Two front accessible USB 2.0 ports
7. One front video port
8. Quick release levers for fast server access
9. Front accessible Processor and memory drawer
10. Support for up to four AMD Opteron processors
11. Support for up to eight hot plug Small Form-Factor (SFF) SAS/ Serial ATA (SATA)/Solid State drives
12. Universal Tool-less "Snap In" Sliding Rail Solution
13. Server Lifting Handles
14. 4U (7" Height) Rack Form Factor
15. Up to eleven available PCI Express/PCI-X Internal Expansion Slots

Rear View:

1. Hot Plug Redundant Power supplies (2 or 4 ship depending on the model)
2. Integrated Lights-Out 3 port
3. Mouse port
4. Serial port
5. Gigabit NIC Ports
6. Gigabit NIC Ports
7. Gigabit NIC Ports
8. Gigabit NIC Ports
9. Video port
10. Keyboard port
11. PCI-Express or PCI-X option (slots 1-6)
12. PCI-Express slots (slots 7-11)
13. Two USB ports
14. Service tool

What's New

- Support for new AMD Opteron 6200 series processor refresh
- Support for HP 300GB 6G SAS Enterprise Hard Disk Drive
- 1TB max memory with support of new 16GB and 32 GB DDR3-1333 low voltage memory RDIMMs

Standard Features

NOTE: For the Standard Features shipped in the "Factory Integrated Models", please see the "Configuration Information - Factory Integrated Models" section.

Processor Two or four of the following depending on Model	Sixteen-Core Processors AMD Opteron™ 6282SE (2.6GHz/16-core/16MB/140W) Processor AMD Opteron™ 6276 (2.3GHz/16-core/16MB/115W) Processor AMD Opteron™ 6272 (2.1GHz/16-core/16MB/115W) Processor AMD Opteron™ 6274 (2.2GHz/16-core/16MB/115W) Processor AMD Opteron™ 6262HE (1.6GHz/16-core/16MB/85W) Processor Twelve-Core Processors AMD Opteron™ 6238 (2.6GHz/12-core/16MB/115W) Processor AMD Opteron™ 6234 (2.4GHz/12-core/16MB/115W) Processor AMD Opteron™ 6176SE (2.3GHz/12-core/12MB/105W) Processor AMD Opteron™ 6174 (2.2GHz/12-core/12MB/80W) Processor AMD Opteron™ 6172 (2.1GHz/12-core/12MB/80W) Processor AMD Opteron™ 6168 (1.9GHz/12-core/12MB/80W) Processor AMD Opteron™ 6164HE (1.7GHz/12-core/12MB/65W) Processor AMD Opteron™ 6166HE (1.8GHz/12-core/12MB/65W) Processor AMD Opteron™ 6176 (2.3GHz/12-core/12MB/80W) Processor AMD Opteron™ 6180SE (2.5GHz/12-core/12MB/105W) Processor Eight-Core Processors AMD Opteron™ 6220 (3.0GHz/8-core/16MB/115W) Processor AMD Opteron™ 6212 (2.6GHz/8-core/16MB/115W) Processor AMD Opteron™ 6128 (2.0GHz/8-core/12MB/80W) Processor AMD Opteron™ 6132HE (2.2GHz/8-core/12MB/65W) Processor AMD Opteron™ 6136 (2.4GHz/8-core/12MB/80W) Processor AMD Opteron™ 6140 (2.6GHz/8-core/12MB/80W) Processor NOTE: Processor wattage references reflect Thermal Design Power (TDP). For more information on TDP and Average CPU Power (ACP) visit: http://www.amd.com/acp. NOTE: SmartStart version 8.70B or greater required by 6200 series processors. Latest version can be downloaded from the web at http://www.hp.com/go/foundation.
Cache Memory	16MB Level 3 cache
Chipset	AMD SR5690/SP5100
Upgradeability	Upgradeable to quad (4) processors NOTE: To upgrade from 2P to 4P the secondary CPU/Memory kit needs to be bought separately, part number listed in the options section. 4P models already have this kit configured.

Standard Features

Memory Protection	Advanced ECC capabilities Online Spare Memory	
Memory One of the following depending on Model	Type	PC3-10600R Registered DDR3 (1333MHz)
	Performance Models	128GB (16x8GB) of PC3-10600R (DDR3-1333) 64GB (8x8GB) of PC3-10600R (DDR3-1333) 64GB (16x4GB) of PC3-10600R (DDR3-1333) 32GB (8x4GB) of PC3-10600R (DDR3-1333) 32GB (4x8GB) of PC3-10600R (DDR3-1333) 32GB (8x4GB) of PC3-10600R (DDR3-1333)
	Base Models	32GB (8x4GB) of PC3-10600 (DDR3-1333)
	Maximum	1TB
Network Controller	HP NC375i Integrated Quad Port Gigabit Server Adapter	

Expansion Slots

NOTE: Up to 11 FL/FH I/O slots. 2 PCI-E 2.0x16 and 3 PCI-E 2.0 x8 slots standard.

Expansion Slots (Main IO Board standard)

Expansion Slots #	Technology	Bus Width	Connector Width	Form Factor	Notes
1	N/A	N/A	N/A	N/A	
2	N/A	N/A	N/A	N/A	
3	N/A	N/A	N/A	N/A	
4	N/A	N/A	N/A	N/A	
5	N/A	N/A	N/A	N/A	
6	N/A	N/A	N/A	N/A	
7	PCI-Express	x8	x16	Full Length/Full Height	
8	PCI-Express	x8	x16	Full Length/Full Height	
9	PCI-Express	x16	x16	Full Length/Full Height	
10	PCI-Express	x8	x16	Full Length/Full Height	
11	PCI-Express	x16	x16	Full Length/Full Height	

Expansion Slots with IO Expander (combination PCI-X, PCI-e and 300W GPU

Expansion Slots #	Technology	Bus Width	Connector Width	Form Factor	Notes
1	PCI-X	64-bit	N/A	Full Length/Full Height	
2	PCI-X	64-bit	N/A	Full Length/Full Height	

3	PCI-Express	x4	x8	Full Length/Full Height	
4	PCI-Express	x8	x16	Full Length/Full Height	
5	PCI-Express	x8	x16	Full Length/Full Height	
6	PCI-Express	x16	x16	Full Length/Full Height	
7	PCI-Express	x8	x16	Full Length/Full Height	
8	PCI-Express	x8	x16	Full Length/Full Height	
9	PCI-Express	x16	x16	Full Length/Full Height	
10	PCI-Express	x8	x16	Full Length/Full Height	
11	PCI-Express	x16	x16	Full Length/Full Height	

Expansion Slots with I/O Expander (standard PCI-e option)

Expansion Slots #	Technology	Bus Width	Connector Width	Form Factor	Notes
1	PCI-Express	x8	x16	Full Length/Full Height	
2	PCI-Express	x8	x16	Full Length/Full Height	
3	PCI-Express	x16	x16	Full Length/Full Height	
4	PCI-Express	x8	x16	Full Length/Full Height	
5	PCI-Express	x8	x16	Full Length/Full Height	
6	PCI-Express	x16	x16	Full Length/Full Height	
7	PCI-Express	x8	x16	Full Length/Full Height	
8	PCI-Express	x8	x16	Full Length/Full Height	
9	PCI-Express	x16	x16	Full Length/Full Height	
10	PCI-Express	x8	x16	Full Length/Full Height	
11	PCI-Express	x16	x16	Full Length/Full Height	

Standard Features

Storage Controller
One of the following depending on Model

Performance Models	HP Smart Array P410i/1G FBWC Controller
Base Models	HP Smart Array P410i/512MB FBWC or Zero Memory Controller

The Flash Backed Write Cache (FBWC) increases cache data retention capabilities from two days of existing battery backed write cache (BBWC) to infinite data retention.

- HP Smart Array P410istandard on all Performance and Base Models
- 1G FBWC standard on all Performance Models
- Transportable data protection
- Increases overall controller performance

Internal Storage Devices

Diskette Drive	None
Optical Drives	Optional Optical Drive - HP Slim SATA DVD ROM Optical Drive ejectable for security and serviceability
Hard Drives	None standard
Hard Disk Drive Backplane	Internal SAS backplane supports up to eight SFF hard disk drives
Drive Bays	Up to 8 Small Form Factor drive bays total

Maximum Internal Storage

Hot Plug SFF SAS	8TB	8 x 1TB
Hot Plug SFF SATA	8TB	8 x 1TB
Hot Plug SFF SSD	3.2TB	8 x 400GB
Hot Plug SFF SAS SSD	6.4TB	8 x 800GB

NOTE: There is an extra internal SSD slot available as well

Interfaces

Serial	1
Video	1 front, 1 rear
Network RJ-45 (Ethernet)	4
iLO 3 Remote Management	1
Keyboard	1
Pointing Device (Mouse)	1
USB 2.0 Ports	6 total: 2 front; 2 rear; 2 internal NOTE: Please see the following URL for additional information regarding USB support: http://h18004.www1.hp.com/products/servers/platforms/usb-support.html

Standard Features

Industry Standard Compliance	ACPI 2.0. Compliant PCI 2.0 Compliant PXE Support WOL Support Physical Address Extension (PAE) Support Microsoft® Logo certifications USB 2.0 Support
Server Power Cords	NOTE: If customers require a local power cord, they can check the power cord matrix for the appropriate county specific sku. Please see the following power cord matrix for details: http://www.hp.com/go/powercordmatrix
Power Supply	1200W AC Power Supply NOTE: Two Hot Plug Power Supplies ships standard with 2P Models. Four Hot Plug Power Supplies ship standard with 4P Models.
System Fans	4 Hot plug, redundant fans (individually removable)
Required Cabling	For required cabling information, refer to the HP Web site at: www.hp.com/servers/dl585
Operating Systems and Virtualization Software Support for ProLiant Servers	Microsoft Windows Server Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) Oracle Solaris VMware Citrix XenServer NOTE: For more information on HP's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server including how to purchase from HP, please visit our OS Support Site at: www.hp.com/go/ossupport and our driver download site www.hp.com/support/DL585G7
Graphics	Integrated ATI RN-50 1600x1280x64K 16M color (32 MB DDR1 memory)
Form Factor	Rack (4U = 7 inches), ships with sliding rails and cable management system Space saving form factor (4U) provides space efficiencies while providing maximum deployment flexibility
HP Insight management software	HP Service Pack for ProLiant — HP Service Pack for ProLiant is an enhanced, re-packaging of ProLiant systems software and firmware, but is still based on the rich legacy of ProLiant Support Packs (PSPs) and HP Smart Update Firmware DVD that are originally found in the Insight Foundation suite for ProLiant. It is a comprehensive systems software and firmware release offered as a tested

solution on all ProLiant servers supported by Insight Foundation version 8.70. It evolves beyond separate installation of HP PSPs and the HP Smart Update Firmware DVD by providing a single image that combines both of these products. It offers combined firmware and systems software packaging and improved processes for drivers, utilities, agents, non agents, and other utilities that are required to keep pace in today's rapidly expanding technology infrastructure.

Main or base releases for HP Service Pack for ProLiant are planned approximately 3 times a year, but look for interim update releases that will capture hot fixes released between main releases. HP Service Pack for ProLiant is supported on all HP ProLiant SL/ML/DL 100, 300, 500, 700, and 900 servers and BladeSystems series servers that are supported with Insight Foundation version 8.70 and will supersede and replace Insight Foundation. It is downloadable from: www.hp.com/go/server/service_packs/updates as a web only release and is not available on media.

The first release of HP Service Pack for ProLiant is Version 2011.06.0. It contains the first comprehensive collection of firmware and system software components, all tested together that include drivers, agents, non-agents, utilities, firmware packages for servers, controllers, storage, blades, enclosures, and all components and options supported by HP ProLiant Support Packs for Windows and Linux version 8.70. Additionally, VMware offline firmware updates will be included.

More information can be found at this link for HP Service Pack for ProLiant: www.hp.com/go/server/service_packs

HP Insight Foundation

Insight Foundation is being baselined at version v8.70 which means the following:

- Its Media Kit (contains 2 SmartStart CDs, the Firmware DVD, and the Management DVD) will continue to ship with all supported ProLiant G7 or earlier BTO servers until the last supported server is no longer shipping.
- The Media Kit will not be updated past version 8.70.
- ProLiant G7 or earlier CTO servers are able to order the Media Kit with the understanding that the media is not updated. Please check specific server QuickSpecs for availability of CTO Kit.
- PSP and Firmware DVD downloads will be updated through 2Q 2012 at the HP Insight Foundation Suite for ProLiant downloads tab: http://www.hp.com/go/foundation

Customers are urged to use the replacement product, HP Service Pack for ProLiant, instead of Insight Foundation Suite which is found at these location:

- www.hp.com/go/spp
- www.hp.com/go/spp/download

HP Integrated Lights-Out (iLO)

HP Integrated Lights-Out (iLO) simplifies server setup, health monitoring, power and thermal control, and lights-out remote administration of ProLiant ML, DL, and BL servers. HP iLO functions without additional software and can be accessed from any location via a web browser. HP iLO works hand-in-hand with HP Systems Insight Manager, Insight Control suites, and Insight

Standard Features

Dynamics for ProLiant, helping customers unleash the value of the ProLiant platform and deliver the highest possible quality of IT service. For more information, visit: www.hp.com/go/iLO

Intelligent Manageability

HP Systems Insight Manager software
SmartStart
Redundant ROM
Remote Flash ROM
Management Agents
Integrated Management Log (IML)
Automatic Server Recovery-2 (ASR-2)
ROM-Based Setup Utility (RBSU)
Dynamic Sector Repairing (with Smart Array Controllers)
Drive Parameter Tracking (with Smart Array Controllers)
Pre-Failure Warranty (covers processors, SAS hard drives and memory)
Redundant/adaptive load balancing NIC Support

Security

Power-on password
Keyboard password
Diskette drive control enable/disable
Diskette boot control enable/disable
External USB port enable/disable
Network Server Mode
Serial interface control
Administrator's password
Removable optical drive

Warranty

This product is covered by a global limited warranty and supported by HP Services and a worldwide network of HP Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HP Care Pack services or customized service agreements. Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.
NOTE: Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have HP replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at: http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html.

Optional Features

HP Insight management software	HP Insight Control	HP Insight Control, a product option, delivers essential infrastructure management that can help save time and money by making it easy to deploy, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console. Two versions of Insight Control are available, to serve environments requiring either a Linux-based or a Windows-based central management server: HP Insight Control for Linux, and HP Insight Control. See www.hp.com/go/insightcontrol HP Insight Control includes one year of 24 x 7 HP Software Technical Support and Update Service ensuring rapid access to HP support staff and proactive delivery of software updates. For more information about this service, please visit: http://www.hp.com/services/insight.
	HP Insight Dynamics for ProLiant	HP Insight Dynamics for ProLiant, a product option, is an integrated command center that enables IT Staff personnel to continuously analyze and optimize a converged infrastructure, while automating and reducing the cost of common data center tasks by as much as 40 percent. As a powerfully integrated by design toolkit to accelerate complex technology projects and simplify daily operations that ultimately enable IT Staff personnel to dynamically keep pace with the organizations changing business requirements. It enables them to plan capacity and power continuously, balance across physical and virtual resources, and ensure cost-effective high availability. It also enables IT organizations to provision infrastructure consistently and automatically from pools of shared resources using a self-service portal. Resources provisioned can range from a single virtual machine to complex multi-tier environments and their associated physical and virtual resource requirements. In addition to the previous functional benefits, it also provides a cost-effective disaster recovery for physical and virtual environments that works with HP Continuous Access software for both the Enterprise Virtual Array and the XP storage array allowing application environments to be reactivated in minutes with the touch of a button to a remote location. NOTE: For more information, visit: http://www.hp.com/go/insightdynamics

Optional Features

High Performance Clusters	HP Cluster Platforms	HP Cluster Platforms are specifically engineered, factory-integrated large-scale ProLiant clusters optimized for High Performance Computing, with a choice of servers, networks and software. Operating system options include specially priced offerings for Red Hat Enterprise Linux and SUSE Linux Enterprise Server, as well as Microsoft Windows HPC Server. A Cluster Platform Configurator simplifies ordering. http://www.hp.com/go/clusters
	HP HPC Interconnects	High Performance Computing (HPC) interconnect technologies are available for this server as part of the HP Cluster Platform portfolio. These high-speed InfiniBand and Gigabit interconnects are fully supported by HP when integrated within an HP cluster. Flexible, validated solutions can be defined with the help of configuration tools. http://www.hp.com/techservers/clusters/ucp/index.html
	HP Cluster Management Utility	HP Cluster Management Utility (CMU) is an HP-licensed and HP-supported suite of tools that are used to manage large-scale Linux ProLiant systems. CMU includes software for the centralized provisioning, management and monitoring of nodes. CMU makes the administration of clusters user friendly, efficient, and effective. http://www.hp.com/go/cmu
	HP HPC Linux Value Pack	HP HPC Linux Value Pack (Value Pack) is an HP-licensed and HP-supported specially priced software bundle for the development and deployment of applications on HPC Cluster Platforms. Value Pack includes the Platform HPC Enterprise Edition suite of tools including the LSF workload scheduler, the HP-MPI parallelization library. Also included are the HP Unified Parallel C compiler and the HP Shmem library, as well as the execution environments for the libraries and compiler. HP HPC Linux Value Pack

Solutions

Designed for enterprise customers running compute- or I/O intensive database and transaction applications, as well as data centers using virtualization and consolidation to reduce server sprawl, the rack optimized 4-processor HP ProLiant DL585 G7 server delivers maximum performance and high availability for highly complex, business critical applications. Specifically, the HP ProLiant DL585 G7 would be excellent for running the following types of applications:

Typical Usage:

- x86 virtualization and consolidation projects
- Electronic Design Automation (EDA)/Semiconductor
- Financial
- Large database applications
- ERP / CRM
- Petrochemical
- Life Science and Material Science
- Video Rendering

Optional Features

Factory Express Portfolio for Servers and Storage

HP Factory Express offers configuration, customization, integration and deployment services for HP servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HP products supported through Factory Express include a wide array of servers and storage: HP Integrity, HP ProLiant, HP ProLiant Server Blades, HP BladeSystem, HP 9000 servers as well as the MSAxxxx, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches.

For more information on Factory Express services for your specific server model please contact your sales representative or go to: http://www.hp.com/go/factory-express.

HP Enterprise Configurator

The HP eConfigure Enterprise Configurator now provides factory default racking for our HP hardware portfolio. This approach is aligned with our strategic direction to meet the needs and expectations of our valued customers. If you require "custom" rack configuration, please contact HP's Customer Business Center or an Authorized Partner for assistance. For additional information please visit: http://www.hp.com/products/configurator

Service and Support

HP Technology Services for Industry Standard Servers and BladeSystem

Capitalizing on HP ProLiant server and HP BladeSystem capabilities requires a service partner who understands your increasingly complex business technology environment. That's why it makes sense to team up with the people who know HP infrastructure hardware and software best - the experienced professionals at HP Services.

What HP ProLiant and BladeSystem Services can do for you

HP ProLiant and BladeSystem Services can help you design, deploy, test, integrate, support, and manage IT and infrastructure solutions. This way, HP proposes services solutions that include more than just uplift of base warranty. You can get the support you need by choosing from one of a number of service packaged solutions we have designed to address wider set of customer support needs.

HP Technology Services meets business challenges with services offered in three packages - **Optimized Care Package, Standard Care Package, and Basic Care Package** - available for each product group. Such packaged solutions enable customers to optimize technology operations, minimize risk and drive better business outcomes with easy-to-buy, easy-to-use scalable support packages for servers, storage, networking and software.

Optimized Care

Optimized Care Package: Supports maintaining servers at optimum performance availability

HP ProLiant Server Hardware Installation

Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner
http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN

HP Installation and Startup for SIM (Systems Insight Manager)

Provides for installation and configuration of the latest version of HP Systems Insight Manager, together with the installation and startup of HP Service Essentials Remote Support Pack
http://h20195.www2.hp.com/v2/GetPDF.aspx/5982-4143EN.pdf

3-Year HP Critical Advantage

Provides end-to-end infrastructure support solution for business critical applications running on virtualized/x86 infrastructures, enabling the customers to cost effectively build, operate, and continuously improve their IT environment
http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=4AA3-1772ENW

Additional Services: Microsoft or Linux or VMware education courses + Facility & technology environmental assessment services + Energy Efficiency Design, Factory Express

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Service and Support

Standard Care	Standard Care Package: Package that maintains high level of server availability HP ProLiant Server Hardware Installation Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN HP Installation and Startup for SIM (Systems Insight Manager) Provides for installation and configuration of the latest version of HP Systems Insight Manager, together with the installation and startup of HP Service Essentials Remote Support Pack http://h20195.www2.hp.com/v2/GetPDF.aspx/5982-4143EN.pdf 3-Year HP 6 hour Hardware Support Onsite Call-to-Repair Service Provides an IT manager with a team of support specialists who will quickly begin troubleshooting the system to help return the hardware to operating condition within 6 hours of the initial service request to the HP Global Solution Center http://h20195.www2.hp.com/V2/GetPDF.aspx/5982-6547EN.pdf 3-Year , HP 24x7 Software Support for Insight Control Provides for the deployment and basic configuration of HP Insight Control on HP ProLiant ML and DL series servers or HP BladeSystem servers http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-6645EEE.pdf Additional Services: Software OS (Microsoft, Linux (SUSE/Red Hat) & VMware Installation & Start Up, and Software Support; Install and Startup Services for Insight Control; Microsoft or Linux or VMware education courses; +30 Proactive Select Credits, Factory Express
Basic Care	Basic Care Package: delivers minimum recommended support service level HP ProLiant Server Hardware Installation Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN 3-Year HP 24x7 4 hour Response, Hardware Support Onsite Service Provides for the deployment and basic configuration of HP Insight Control on HP ProLiant ML and DL series servers or HP BladeSystem servers http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA0-9972ENW.pdf Additional Services: Software OS (Microsoft, Linux (SUSE/Red Hat) & VMware Installation & Start Up and Software Support); +10 Proactive Select Credits, Factory Express
Insight Remote Support	The packages include HP Insight Remote Support that uses proven technology to deliver secure, reliable 24x7 remote monitoring, diagnoses, and problem resolution. It is available at no additional cost to all warranty, HP Care Pack Service, and service agreement customers.
For more information	To learn more on HP ProLiant servers and HP BladeSystem servers, please contact your HP sales representative or HP Authorized Channel Partner. Or visit: http://www.hp.com/services/proliant

Pre-configured Models

NOTE: For the Standard Features shipped in the "Factory Integrated Models", please see the "Configuration Information - Factory Integrated Models" section.
NOTE: Pre-configured models ship with the configurations below. Options can be selected from the Core or Additional options section of this QuickSpecs.
NOTE: HP does not allow factory integration of options into pre-configured models. Any additional options purchased will be shipped separately.
NOTE: If you desire a custom configuration please see "Configuration Information - Factory Integrated Models" section of this QuickSpecs.
NOTE: Not all models are available in all regions. Check with your local country HP offices for availability.
NOTE: SmartStart version 8.70B or greater required by 6200 series processors. Latest version can be downloaded from the web at http://www.hp.com/go/foundation.

Performance Models

HP ProLiant DL585 G7 6282SE 4P 128GB-R Hot Plug SFF 1200W PS Server 653745-xx1	Processors	(4) AMD Opteron™ 6282SE (2.6GHz/16-core/16MB/140W) Processors
	Cache Memory	16MB L3 cache
	Memory	128GB (16x8GB) of PC3-10600R (DDR3-1333) NOTE: 48 DIMM slots.
	Network Controller	HP NC375i Integrated Quad Port Gigabit Server Adapter
	Storage Controller	Embedded HP Smart Array P410i/1G FBWC Controller
	Hard Drives	None ship standard
	Internal Storage	Up to 8TB of internal storage (SFF SAS)
	Optical Drive	None ship standard
	Power Supply	Four 1200W Platinum Power Supplies standard
	Fans	4 Hot plug, redundant fans (individually removable)
	Integrated Lights Out	Integrated Lights-Out 3 (iLO 3) ships standard
	Insight Control	HP Insight Control No Media single server license, including 1 year of 24x7 Technical Support and Updates
	Form Factor	4U Rack
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

HP ProLiant DL585 G7 6276 4P 128GB-R Hot Plug SFF 1200W PS Server 653746-xx1	Processors	(4) AMD Opteron™ 6276 (2.3GHz/16-core/16MB/115W) Processors
	Cache Memory	16MB L3 cache
	Memory	128GB (16x8GB) of PC3-10600R (DDR3-1333) NOTE: 48 DIMM slots.
	Network Controller	HP NC375i Integrated Quad Port Gigabit Server Adapter
	Storage Controller	Embedded HP Smart Array P410i/1G FBWC Controller
	Hard Drives	None ship standard
	Internal Storage	Up to 8TB of internal storage (SFF SAS)
	Optical Drive	None ship standard
	Power Supply	Four 1200W Platinum Power Supplies standard
	Fans	4 Hot plug, redundant fans (individually removable)
	Integrated Lights Out	Integrated Lights-Out 3 (iLO 3) ships standard

Pre-configured Models

	Insight Control	HP Insight Control No Media single server license, including 1 year of 24x7 Technical Support and Updates
	Form Factor	4U Rack
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.
HP ProLiant DL585 G7 6272 4P 64GB-R Hot Plug SFF 1200W PS Server 653747-xx1	Processors	(4) AMD Opteron™ 6272 (2.1GHz/16-core/16MB/115W) Processors
	Cache Memory	16MB L3 cache
	Memory	64GB (8x8GB) of PC3-10600R (DDR3-1333) NOTE: 48 DIMM slots.
	Network Controller	HP NC375i Integrated Quad Port Gigabit Server Adapter
	Storage Controller	Embedded HP Smart Array P410i/1G FBWC Controller
	Hard Drives	None ship standard
	Internal Storage	Up to 8TB of internal storage (SFF SAS)
	Optical Drive	None ship standard
	Power Supply	Four 1200W Platinum Power Supplies standard
	Fans	4 Hot plug, redundant fans (individually removable)
	Integrated Lights Out	Integrated Lights-Out 3 (iLO 3) ships standard
	Insight Control	HP Insight Control No Media single server license, including 1 year of 24x7 Technical Support and Updates
	Form Factor	4U Rack
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.
HP ProLiant DL585 G7 6180SE 4P 64GB-R P410i/1GB FBWC 8 SFF 1200W RPS IC Server 633964-xx1	Processors	(4) AMD Opteron™ 6180SE (2.5GHz/12-core/12MB/105W) Processors
	Cache Memory	12MB (1 x 12MB) L3 cache
	Memory	64GB (16x4GB) of PC3-10600R (DDR3-1333) NOTE: 48 DIMM slots.
	Network Controller	HP NC375i Integrated Quad Port Gigabit Server Adapter
	Storage Controller	Embedded HP Smart Array P410i,1G FBWC Controller
	Hard Drives	None ship standard
	Internal Storage	Up to 8TB of internal storage
	Optical Drive	None ship standard
	Power Supply	Four 1200W Platinum Power Supplies standard
	Fans	4 Hot plug, redundant fans (individually removable)
	Integrated Lights Out	Integrated Lights-Out 3 (iLO 3) ships standard
	Insight Control	HP Insight Control No Media single server license, including 1 year of 24x7 Technical Support and Updates
	Form Factor	4U Rack
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

Pre-configured Models

HP ProLiant DL585 G7 6176SE 4P 64GB-R P410i/1GB FBWC 8 SFF 1200W RPS Perf IC Svr 601361-xx1	Processors	(4) AMD Opteron™ 6176SE (2.3GHz/12-core/12MB/105W) Processors
	Cache Memory	12MB (1 x 12MB) L3 cache
	Memory	64GB (16x4GB) of PC3-10600R (DDR3-1333) NOTE: 48 DIMM slots.
	Network Controller	HP NC375i Integrated Quad Port Gigabit Server Adapter
	Storage Controller	Embedded HP Smart Array P410i/1G FBWC Controller
	Hard Drives	None ship standard
	Internal Storage	Up to 8TB of internal storage (SFF SAS)
	Optical Drive	None ship standard
	Power Supply	Four 1200W Silver Power Supplies standard
	Fans	4 Hot plug, redundant fans (individually removable)
	Integrated Lights Out	Integrated Lights-Out 3 (iLO 3) ships standard
	Insight Control	HP Insight Control No Media single server license, including 1 year of 24x7 Technical Support and Updates
	Form Factor	4U Rack
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.
HP ProLiant DL585 G7 6174 4P 64GB-R P410i/1GB FBWC 8 SFF 1200W RPS Perf IC Svr 601362-xx1	Processors	(4) AMD Opteron™ 6174 (2.2GHz/12-core/12MB/80W) Processors
	Cache Memory	12MB (1 x 12MB) L3 cache
	Memory	64GB (16x4GB) of PC3-10600R (DDR3-1333) NOTE: 48 DIMM slots.
	Network Controller	HP NC375i Integrated Quad Port Gigabit Server Adapter
	Storage Controller	Embedded HP Smart Array P410i/1G FBWC Controller
	Hard Drives	None ship standard
	Internal Storage	Up to 8TB of internal storage (SFF SAS)
	Optical Drive	None ship standard
	Power Supply	Four 1200W Silver Power Supplies standard
	Fans	4 Hot plug, redundant fans (individually removable)
	Integrated Lights Out	Integrated Lights-Out 3 (iLO 3) ships standard
	Insight Control	HP Insight Control No Media single server license, including 1 year of 24x7 Technical Support and Updates
	Form Factor	4U Rack
	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.
HP ProLiant DL585 G7 6172 4P 32GB-R P410i/1GB FBWC 8 SFF 1200W RPS Perf IC Svr 583108-xx1	Processors	(4) AMD Opteron™ 6172 (2.1GHz/12-core/12MB/80W) Processors
	Cache Memory	12MB (1 x 12MB) L3 cache
	Memory	32GB (8x4GB) of PC3-10600R (DDR3-1333) NOTE: 48 DIMM slots.
	Network Controller	HP NC375i Integrated Quad Port Gigabit Server Adapter
	Storage Controller	Embedded HP Smart Array P410i/1G FBWC Controller

Pre-configured Models

Hard Drives	None ship standard
Internal Storage	Up to 8TB of internal storage (SFF SAS)
Optical Drive	None ship standard
Power Supply	Four 1200W Silver Power Supplies standard
Fans	4 Hot plug, redundant fans (individually removable)
Integrated Lights Out	Integrated Lights-Out 3 (iLO 3) ships standard
Insight Control	HP Insight Control No Media single server license, including 1 year of 24x7 Technical Support and Updates
Form Factor	4U Rack
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

Base Models

HP ProLiant DL585 G7 6238 2P 32GB-R Hot Plug SFF 1200W PS Server
653748-xx1

Processors	(2) AMD Opteron™ 6238 (2.6GHz/12-core/16MB/115W) Processors
Cache Memory	16MB L3 cache
Memory	32GB (4x8GB) of PC3-10600R (DDR3-1333) NOTE: 24 DIMM slots.
Network Controller	HP NC375i Integrated Quad Port Gigabit Server Adapter
Storage Controller	Embedded HP Smart Array P410i Zero Memory Controller
Hard Drives	None ship standard
Internal Storage	Up to 8TB of internal storage (SFF SAS)
Optical Drive	None ship standard
Power Supply	Two 1200W Platinum Power Supplies standard
Fans	4 Hot plug, redundant fans (individually removable)
Integrated Lights Out	Integrated Lights-Out 3 (iLO 3) ships standard
Form Factor	4U Rack
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

HP ProLiant DL585 G7 6168 2P 32GB-R P410i/512 FBWC 8 SFF 1200W RPS Base Server
583105-xx1

Processors	(2) AMD Opteron™ 6168 (1.9GHz/12-core/12MB/80W) Processors
Cache Memory	12MB (1 x 12MB) L3 cache
Memory	32GB (8x4GB) of PC3-10600R (DDR3-1333) NOTE: 24 DIMM slots.
Network Controller	HP NC375i Integrated Quad Port Gigabit Server Adapter
Storage Controller	Embedded HP Smart Array P410i/512MB FBWC Controller
Hard Drives	None ship standard
Internal Storage	Up to 8TB of internal storage (SFF SAS)
Optical Drive	None ship standard
Power Supply	Two 1200W Silver Power Supplies standard
Fans	4 Hot plug, redundant fans (individually removable)
Integrated Lights Out	Integrated Lights-Out 3 (iLO 3) ships standard
Form Factor	4U Rack

	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

Country Code Key	xx = 00	U.S.
	xx = 20	Brazil
	xx = 29	Japan
	xx = 37	AP
	xx = 42	Europe
	xx = AA	PRC

NOTE: This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.
NOTE: Configure-to-order (CTO) servers must start with a CTO Chassis.
NOTE: FIO indicates that this option is only available as a factory installable option.

Step 1: Base Configuration

HP Models	HP ProLiant DL585 G7 Configure-to-order Server	590480-B21
	Factory Integrated Models ship with:	
	HP NC375i Integrated Quad Port Gigabit Server Adapter Five standard PCI-express slots HP Smart Array P410i/ Zero Memory Controller Four redundant hot-plug fans SFF SAS/SATA/SSD drive cage HP Integrated Lights-Out 3 (iLO 3) management processor: integrated on system board Rack (4U), 7-inch NOTE: Power supplies need to be selected separately from Step 2 below.	

Step 2: Choose Required Options (only one of the following from each list unless otherwise noted)

HP Processors	NOTE: If more than two processors are desired, select xxxxxx-L21 and additional processors would be xxxxxx-B21. 3P configurations are not supported	
	Sixteen-Core Processors	
	HP DL585 G7 AMD Opteron™ 6282SE (2.60GHz/16-core/16MB/140W) FIO 2-processor Kit	653976-L21
	HP DL585 G7 AMD Opteron™ 6276 (2.30GHz/16-core/16MB/115W) FIO 2-processor Kit	653978-L21
	HP DL585 G7 AMD Opteron™ 6274 (2.20GHz/16-core/16MB/115W) FIO 2-processor Kit	655514-L21
	HP DL585 G7 AMD Opteron™ 6272 (2.10GHz/16-core/16MB/115W) FIO 2-processor Kit	653980-L21
	HP DL585 G7 AMD Opteron™ 6262HE (1.60GHz/16-core/16MB/85W) FIO 2-processor Kit	655522-L21
	Twelve-Core Processors	
	HP DL585 G7 AMD Opteron™ 6238 (2.60GHz/12-core/16MB/115W) FIO 2-processor Kit	653982-L21
	HP DL585 G7 AMD Opteron™ 6234 (2.40GHz/12-core/16MB/115W) FIO 2-processor Kit	655518-L21
	HP DL585 G7 AMD Opteron™ 6180SE (2.5GHz/12-core/12MB/140W) FIO 2-processor Kit	633965-L21
	HP DL585 G7 AMD Opteron™ 6176SE (2.3GHz/12-core/12MB/140W) FIO 2-processor Kit	601351-L21
	HP DL585 G7 AMD Opteron™ 6176 (2.3GHz/12-core/12MB/115W) FIO 2-processor Kit	633967-L21

	HP DL585 G7 AMD Opteron™ 6174 (2.2GHz/12-core/12MB/115W) FIO 2-processor Kit	601353-L21
	HP DL585 G7 AMD Opteron™ 6172 (2.1GHz/12-core/12MB/115W) FIO 2-processor Kit	583109-L21
	HP DL585 G7 AMD Opteron™ 6168 (1.9GHz/12-core/12MB/115W) FIO 2-processor Kit	583106-L21
	HP DL585 G7 AMD Opteron™ 6164HE (1.7GHz/12-core/12MB/85W) FIO 2-processor Kit	601357-L21
	HP DL585 G7 AMD Opteron™ 6166HE (1.8GHz/12-core/12MB/85W) FIO 2-processor Kit	633971-L21
	Eight-Core processors	
	HP DL585 G7 AMD Opteron™ 6220 (3.0GHz/8-core/16MB/115W) FIO 2-processor Kit	655520-L21
	HP DL585 G7 AMD Opteron™ 6212 (2.60GHz/8-core/16MB/115W) FIO 2-processor Kit	655516-L21
	HP DL585 G7 AMD Opteron™ 6140 (2.6GHz/8-core/12MB/115W) FIO 2-processor Kit	633969-L21
	HP DL585 G7 AMD Opteron™ 6136 (2.4GHz/8-core/12MB/115W) FIO 2-processor Kit	601355-L21
	HP DL585 G7 AMD Opteron™ 6128 (2.0GHz/8-core/12MB/115W) FIO 2-processor Kit	583103-L21
	HP DL585 G7 AMD Opteron™ 6132HE (2.2GHz/8-core/12MB/85W) FIO 2-processor Kit	633973-L21
HP Memory	NOTE: HP Memory selection requires a minimum quantity 2.	
	HP 2GB (1x2GB) Dual Rank x8 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	593907-B21
	HP 4GB (1x4GB) Single Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	593911-B21
	HP 4GB (1x4GB) Single Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit	604500-B21
	HP 8GB (1x8GB) Dual Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	593913-B21
	HP 8GB (1x8GB) Dual Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit	604502-B21
	HP 16GB (1x16GB) Quad Rank x4 PC3-8500 (DDR3-1066) Registered CAS-7 Memory Kit	593915-B21
	HP 16GB (1x16GB) Dual Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 LP Memory Kit	627808-B21
	HP 32GB (1x32GB) Quad Rank x4 PC3L-8500 (DDR3-1066) Registered CAS-7 LP Memory Kit	627810-B21
HP Power Supplies	HP 1200W Common Slot Silver Hot Plug Power Supply Kit	500172-B21
	HP 1200W Common Slot Platinum Hot Plug Power Supply Kit	578322-B21
	NOTE: Option Kit contains optional power supply, an IEC power cable and PDU IEC cables.	

Step 3: Choose Additional Factory Integratable Options (only one of the following from each list unless otherwise noted)

HP Storage Controllers	HP Smart Array P212/256 BBWC 1-ports Int/1-ports Ext PCIe x8 FIO SAS Controller	491191-B21
	HP Smart Array P411/256 BBWC 2-ports Ext PCIe x8 FIO SAS Controller	491193-B21
HP Insight Software	HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO License	582765-B21
	HP Insight Control for Linux including 1yr 24x7 Support ML/DL Bundle 1 Server FIO License	TC203A

Step 4: Choose Additional Options for Factory Integration

NOTE: For additional options, please refer to the "Core Options" and "Additional Options" section below.

NOTE: Some options may not be integrated at the factory. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for additional information.

HP Unique Options	HP DL585 G7 PCI-E Riser Card NOTE: Adds 2 PCI-E 2.0 x16, 4 PCI-E 2.0 x8	590485-B21
	HP DL585 G7 PCI-E Riser v2 Option Kit NOTE: Adds 2 PCI-E 2.0 x16, 4 PCI-E 2.0 x8. NOTE: v2 recommended for AMD Opteron 6200 processor configurations.	659805-B21
	HP DL585 G7 PCI-E/X Riser Card NOTE: Adds 1 PCI-E 2.0 x16, 2 PCI-E 2.0 x8, 1 PCI-E 2.0 x4, 2 PCI-X	590487-B21
	HP DL585 G7 PCI-E/X Riser v2 Option Kit NOTE: Adds 1 PCI-E 2.0 x16, 2 PCI-E 2.0 x8, 1 PCI-E 2.0 x4, 2 PCI-X. NOTE: v2 recommended for AMD Opteron 6200 processor configurations.	659807-B21
	HP DL585 G7 CPU Memory Secondary Upgrade Option NOTE: Adds processor sockets 3 and 4 and associated DIMM slots.	590489-B21
HP Processors	NOTE: Processor kits contain two processors each.	
	Sixteen Core Processors	
	HP DL585 G7 AMD Opteron™ 6282SE (2.60GHz/16-core/16MB/140W) 2-processor Kit	653976-B21
	HP DL585 G7 AMD Opteron™ 6276 (2.30GHz/16-core/16MB/115W) 2-processor Kit	653978-B21
	HP DL585 G7 AMD Opteron™ 6274 (2.20GHz/16-core/16MB/115W) 2-processor Kit	655514-B21
	HP DL585 G7 AMD Opteron™ 6272 (2.10GHz/16-core/16MB/115W) 2-processor Kit	653980-B21
	HP DL585 G7 AMD Opteron™ 6262HE (1.60GHz/16-core/16MB/85W) 2-processor Kit	655522-B21
	Twelve-Core Processors	
	HP DL585 G7 AMD Opteron™ 6238 (2.60GHz/12-core/16MB/115W) 2-processor Kit	653982-B21
	HP DL585 G7 AMD Opteron™ 6234 (2.40GHz/12-core/16MB/115W) 2-processor Kit	655518-B21
	HP DL585 G7 AMD Opteron™ 6180SE (2.5GHz/12-core/12MB/140W) 2-processor Kit	633965-B21
	HP DL585 G7 AMD Opteron™ 6176SE (2.3GHz/12-core/12MB/140W) 2-processor Kit	601351-B21
	HP DL585 G7 AMD Opteron™ 6176 (2.3GHz/12-core/12MB/115W) 2-processor Kit	633967-B21
	HP DL585 G7 AMD Opteron™ 6174 (2.2GHz/12-core/12MB/115W) 2-processor Kit	601353-B21
	HP DL585 G7 AMD Opteron™ 6172 (2.1GHz/12-core/12MB/115W) 2-processor Kit	583109-B21
	HP DL585 G7 AMD Opteron™ 6168 (1.9GHz/12-core/12MB/115W) 2-processor Kit	583106-B21

Core Options

	HP DL585 G7 AMD Opteron™ 6166HE (1.8GHz/12-core/12MB/85W) 2-processor Kit	633971-B21
	HP DL585 G7 AMD Opteron™ 6164HE (1.7GHz/12-core/12MB/85W) 2-processor Kit	601357-B21
	Eight-Core Processors	
	HP DL585 G7 AMD Opteron™ 6220 (3.0GHz/8-core/16MB/115W) 2-processor Kit	655520-B21
	HP DL585 G7 AMD Opteron™ 6212 (2.60GHz/8-core/16MB/115W) 2-processor Kit	655516-B21
	HP DL585 G7 AMD Opteron™ 6140 (2.6GHz/8-core/12MB/115W) 2-processor Kit	633969-B21
	HP DL585 G7 AMD Opteron™ 6136 (2.4GHz/8-core/12MB/115W) 2-processor Kit	601355-B21
	HP DL585 G7 AMD Opteron™ 6128 (2.0GHz/8-core/12MB/115W) 2-processor Kit	583103-B21
	HP DL585 G7 AMD Opteron™ 6132HE (2.2GHz/8-core/12MB/85W) 2-processor Kit	633973-B21
HP Memory	NOTE: DIMM banks are active only when the corresponding processor socket is populated. NOTE: Memory must be installed in like-pairs, i.e. two of the same size.	
	Registered DIMMs (RDIMMs)	
	HP 2GB (1x2GB) Dual Rank x8 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	593907-B21
	HP 4GB (1x4GB) Single Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	593911-B21
	HP 4GB (1x4GB) Single Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit	604500-B21
	HP 8GB (1x8GB) Dual Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	593913-B21
	HP 8GB (1x8GB) Dual Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit	604502-B21
	HP 16GB (1x16GB) Quad Rank x4 PC3-8500 (DDR3-1066) Registered CAS-7 Memory Kit	593915-B21
	HP 16GB (1x16GB) Dual Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 LP Memory Kit	627808-B21
	HP 32GB (1x32GB) Quad Rank x4 PC3L-8500 (DDR3-1066) Registered CAS-7 LP Memory Kit	627810-B21
	Upgrade Options	
	HP DL585 G7 CPU Memory Secondary Upgrade Option NOTE: Adds processor sockets 3 and 4 and associated DIMM slots.	590489-B21
HP Optical Drives	NOTE: Optical drives are ejectable.	
	HP Slim 12.7mm SATA DVD-ROM Optical Drive	481041-B21
	HP Slim 12.7mm SATA DVD-RW Optical Drive	481043-B21
HP Hard Drives	NOTE: The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or	

the system bandwidth will be negotiated down to an acceptable level for all components.

NOTE: Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

SAS Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives

HP 900GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	619291-B21
HP 600GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	581286-B21
HP 450GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	581284-B21
HP 300GB 6G SAS 15K rpm SFF (2.5-inch) Hot Plug Enterprise 3 yr Warranty Hard Drive	627117-B21
HP 300GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	507127-B21
HP 146GB 6G SAS 15K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	512547-B21
HP 72GB 6G SAS 15K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	512545-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/12244_div/12244_div.html (Worldwide)

SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives

HP 1TB 6G SAS 7.2K rpm SFF (2.5-inch) Dual Port Midline 1yr Warranty Hard Drive	605835-B21
HP 500GB 6G SAS 7.2K rpm SFF (2.5-inch) Dual Port Midline 1yr Warranty Hard Drive	507610-B21

SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives

HP 1TB 3G SATA 7.2K rpm SFF (2.5-inch) Hot Plug Midline 1yr Warranty Hard Drive	625609-B21
HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Midline 1yr Warranty Hard Drive	507750-B21

NOTE: SATA drives have a 1 year warranty. Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/13021_div/13021_div.html (Worldwide)

SATA Hot Plug 2.5" Enterprise Mainstream Solid State Drives

HP 400GB 3G SATA MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive	636597-B21
HP 200GB 3G SATA MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive	636595-B21
HP 100GB 3G SATA MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive	636593-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/13415_div/13415_div.html (Worldwide)

6G SAS Hot Plug Enterprise Performance Solid State Drives

	HP 400GB 6G SAS SLC SFF (2.5-inch) Enterprise Performance 3yr Warranty Solid State Drive	632494-B21
	HP 200GB 6G SAS SLC SFF (2.5-inch) Enterprise Performance 3yr Warranty Solid State Drive	632492-B21
	6G SAS Hot Plug Enterprise Mainstream Solid State Drives	
	HP 800GB 6G SAS MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive	632506-B21
	HP 400GB 6G SAS MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive	632504-B21
	HP 200GB 6G SAS MLC SFF (2.5-inch) Enterprise Mainstream 3yr Warranty Solid State Drive	632502-B21
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/14038_div/14038_div.html (Worldwide)	
HP Networking	Gigabit Ethernet adapters	
	HP NC112T PCI Express Gigabit Server Adapter	503746-B21
	HP NC360T PCI-E Dual Port Gigabit Server Adapter	412648-B21
	HP NC365T 4-port Ethernet Server Adapter	593722-B21
	HP NC373F PCI-E Multifunction 1000SX Gigabit Svr Adapter	394793-B21
	HP NC373T PCI-E Multifunction Gigabit Server Adapter	394791-B21
	HP NC375T PCI Express Quad Port Gigabit Server Adapter	538696-B21
	HP NC382T PCI Express Dual Port Multifunction Gigabit Server Adapter	458492-B21
	10 Gigabit Ethernet adapters NOTE: A minimum of two Gigabytes (2 GB) of server memory is required per each adapter. NOTE: Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately.	
	HP NC522SFP Dual Port 10GbE Gigabit Server Adapter	468332-B21
	HP NC523SFP 10Gb 2-port Server Adapter	593717-B21
	HP NC524SFP Dual Port 10GbE Module	489892-B21
	HP NC550SFP Dual Port 10GbE Server Adapter	581201-B21
	HP NC552SFP 10Gb 2-port Ethernet Server Adapter	614203-B21
	HP 10 GbE PCI-e G2 Dual Port Network Interface Card	516937-B21
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: www.hp.com/go/ProLiantNICs.	
HP InfiniBand	HP InfiniBand 4X DDR PCI-E 0 Memory Dual Port HCA	483513-B21
	QLogic InfiniBand 4X QDR PCI-E G2 Dual Port HCA	583211-B21
	HP InfiniBand 4X QDR ConnectX-2 PCIe G2 Dual Port HCA	592520-B21
	HP InfiniBand 4X DDR ConnectX-2 PCIe G2 Dual Port HCA	592521-B21

Core Options

HP I/O Expansion Options	HP DL585 G7 PCI-E Riser v2 Option Kit NOTE: Adds 2 PCI-E 2.0 x16, 4 PCI-E 2.0 x8. NOTE: v2 recommended for AMD Opteron 6200 processor configurations.	659805-B21
	HP DL585 G7 PCI-E/X Riser v2 Option Kit NOTE: Adds 1 PCI-E 2.0 x16, 2 PCI-E 2.0 x8, 1 PCI-E 2.0 x4, 2 PCI-X. NOTE: v2 recommended for AMD Opteron 6200 processor configurations.	659807-B21
HP Power Supplies	NOTE: Prior to making a power supply selection it is highly recommended that the HP Power Advisor is run to determine the right size power supply for your server configuration. The HP Power Advisor is located at: www.hp.com/go/hppoweradvisor.	
	HP 1200W Common Slot Silver Hot Plug Power Supply Kit	500172-B21
	HP 1200W Common Slot Platinum Hot Plug Power Supply Kit	578322-B21
	NOTE: Option Kits contains optional power supply, an IEC power cable and PDU IEC cables.	

NOTE: Some options may not be integrated at the factory. To ensure only valid configurations are ordered, HP recommends the use of an HP approved configurator. Contact your local sales representative for additional information.

HP Insight Software	HP Insight Control	
	HP Insight Control including 1yr 24x7 Technical Support and Updates Single Server License	452148-B22
	HP Insight Control including 1yr 24x7 Technical Support and Updates Electronic License	T9074BAE
	HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Electronic License	TC278AAE
	HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Tracking License	TC275A
	NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key. NOTE: Customer will receive a license entitlement certificate. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service. NOTE: Licenses ship without media. The HP Insight Control Media Kit can be ordered separately, or can be downloaded at: http://www.hp.com/go/insightupdates. NOTE: For additional license options please see the Insight Control QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12631_div/12631_div.html	
	HP Insight Control for Linux	
	HP Insight Control for Linux including 1yr 24x7 Support Electronic License	TC213AAE
	HP Insight Control for Linux including 1yr 24x7 Support Single Server License	TC209A
	HP Insight Control for Linux Media Kit	TC208A
	NOTE: Media pack DVD contains the ISO image for HP Insight Control for Linux, HP Systems Insight Manager, HP Insight Control power management, HP Insight Control virtual machine management, and an integrated installer. Servers must be acquired separately. NOTE: Licenses ship without media. The Media Kit for Insight Control for Linux can be ordered separately, or can be downloaded at: http://www.hp.com/go/ic-linux (click on Download button). NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single set of activation keys. NOTE: For additional License Kits, including electronic licensing options, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/13019_div/13019_div.html	
	HP Integrated Lights-Out (iLO) Advanced	
	HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License	512485-B21
	HP iLO Advanced including 1yr 24x7 Technical Support and Updates Electronic License	TA850AAE
	HP Insight Software Media Kit	436222-B21
	NOTE: Insight Software DVD media without licenses. Contains HP Systems Insight Manager, HP Insight Control, HP Insight Dynamics, HP Insight Control for Microsoft System Center, and Virtual Connect Enterprise Manager software. Uses an integrated installer to perform quick and accurate software installation and updates.	

NOTE: This license allows 1 server to be deployed and managed via HP iLO Advanced. Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support Service.
NOTE: Electronic software is available in all countries except China and Japan. Customers in China and Japan should order the physical equivalent.
NOTE: For additional license kits, including electronic delivery options, please see the QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/12362_div/12362_div.html

HP Insight Control server deployment

HP Insight Control Server Deployment including 1yr 24x7 Support Electronic License	T9082AAE
HP Insight Control Server Deployment including 1yr 24x7 Support Single Server License	452151-B21

NOTE: Licenses ship without media. The Insight Control Media Kit can be ordered separately, or can be downloaded at: http://www.hp.com/go/insightupdates.
NOTE: Electronic licenses can be used to purchase multiple licenses with a single activation key, and is available in all countries except China and Japan. Customers in China and Japan should order the physical equivalent.
NOTE: Customer will receive a license entitlement certificate, which must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support Service.
NOTE: For additional license kits please see the Insight Control QuickSpecs at:
http://h18004.www1.hp.com/products/quickspecs/12631_div/12631_div.html

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High Performance Clusters

HP Cluster Management Utility

HP Cluster Management Utility Compute Node Flexible License NOTE: This part number can be used to purchase one certificate for multiple licenses with a single activation key. Each license is for one node (server). Customer will receive a printed end user license agreement and license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online in order to obtain a license key.	QL803A
HP Cluster Management Utility License and Media NOTE: Order a minimum of one license per cluster to purchase media including software and documentation, which will be delivered to the customer, and also licenses CMU management. No license key is delivered or required.	433257-B21

NOTE: For additional license kits please see the QuickSpecs at:
http://h18004.www1.hp.com/products/quickspecs/12612_div/12612_div.html

HP HPC Linux Value Pack

HP High Performance Computing Linux Value Pack 1 Processor Flexible License NOTE: This part number can be used to purchase one certificate for multiple licenses with a single activation key. Each license is for one socket (a.k.a. processor). Customer will receive a printed end user license agreement and license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online in order to obtain a license key.	TC293B
HP High Performance Computing Linux Value Pack Media Kit NOTE: This part number can be used to purchase media including software and documentation, which will be delivered to the customer.	TC294A

NOTE: For additional license kits please see the QuickSpecs at:
http://h18004.www1.hp.com/products/quickspecs/13485_div/13485_div.html

HP Graphics Options	HP DL580/DL585/DL980 G7 Power Cable Kit NOTE: The HP ProLiant DL585 G7 can support up to 4 (225W) or 3 (300W) Graphic Cards and/or GPGPU Accelerator Options. NOTE: An option kit will be required per Graphic Card and/or GPGPU Accelerator Options. NOTE: Depending on the number of GPGPUs required, customers will need to purchase one of the following I/O expansion boards: HP DL585G7 PCI-E Riser v2 Option Kit PN: 659805-B21 (Adds 2 PCI-E 2.0 x16, 4 PCI-E 2.0 x8. OR the HP DL585G7 PCI-E/X Riser v2 Option Kit: PN: 659807-B21 (Adds 1 PCI-E 2.0 x16, 2 PCI-E 2.0 x8, 1 PCI-E 2.0 x4, 2 PCI-X).	631660-B21
HP I/O Accelerator Options	HP 160GB Single Level Cell PCIe ioDrive for ProLiant Servers	600278-B21
	NOTE: A low-profile PCI bracket is included for use in low-profile slots.	
	HP 320GB Multi Level Cell PCIe ioDrive for ProLiant Servers	600279-B21
	NOTE: A low-profile PCI bracket is included for use in low-profile slots.	
	HP 320GB Single Level Cell PCIe ioDrive Duo for ProLiant Servers	600281-B21
	HP 640GB Multi Level Cell PCIe ioDrive Duo for ProLiant Servers	600282-B21
	HP 1.28TB Multi Level Cell PCIe IO Accelerator	641027-B21
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13587_div/13587_div.html (Worldwide)	
HP Security	HP Trusted Platform Module Option NOTE: The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys. Windows® BitLocker™ Drive Encryption (BitLocker) is a data protection feature available in Windows Server® 2008. BitLocker leverages the enhanced security capabilities of a Trusted Platform Module (TPM) version 1.2. The TPM works with BitLocker to help protect user data and to ensure that a server running Windows Server 2008 has not been tampered with while the system was offline. For more information about TPM, including a white paper, go to: www.hp.com/go/TPM. NOTE: ProLiant OS pre-installed units will come with the partition required for TPM deployment. NOTE: The TPM key is unique to every TPM deployed server and must be retained. Misplacing or losing the key could result in data loss.	488069-B21
HP Storage Controllers	SAS Controllers	
	Smart Array P212 Controller	
	HP Smart Array P212/ZM 1-ports Int/1-ports Ext PCIe x8 SAS Controller	462828-B21
	HP Smart Array P212/256 1-ports Int/1-ports Ext PCIe x8 SAS Controller	462834-B21

Smart Array P410 Controller	
HP Smart Array P410/256 2-ports Int PCIe x8 SAS Controller	462862-B21
HP Smart Array P410/512 BBWC 2-ports Int PCIe x8 SAS Controller	462864-B21
HP Smart Array P410/512 FBWC 2-ports Int PCIe x8 SAS Controller	578230-B21
HP Smart Array P410/1G FBWC 2-ports Int PCIe x8 SAS Controller	572532-B21
Smart Array P411 Controller	
HP Smart Array P411/256 2-ports Ext PCIe x8 SAS Controller	462830-B21
HP Smart Array P411/512 BBWC 2-ports Ext PCIe x8 SAS Controller	462832-B21
HP Smart Array P411/512 FBWC 2-ports Ext PCIe x8 SAS Controller	578229-B21
HP Smart Array P411/1G FBWC 2-ports Ext PCIe x8 SAS Controller	572531-B21
Smart Array P812 Controller	
HP Smart Array P812/1G FBWC 2-ports Int/4-ports Ext PCIe x8 SAS Controller	487204-B21
Optional Upgrades	
HP 512MB P-Series Battery Backed Write Cache Upgrade NOTE: Supported on HP Smart Array P411 Controller only.	462967-B21
HP 512MB Flash Backed Write Cache	534916-B21
HP 256MB P-series Cache Upgrade	462968-B21
HP 1GB Flash Backed Cache	534562-B21
HP Smart Array Advanced Pack including 1yr 24x7 Technical Support and Updates Single Server License NOTE: This part number can be used to purchase a single license or to order multiple licenses with a single activation key. Customers will receive a license entitlement certificate via e-mail. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Include one year of 24x7 HP Software Technical Support Services. NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13203_div/13203_div.html (Smart Array P212 Controller) http://h18000.www1.hp.com/products/quickspecs/13201_div/13201_div.html (Smart Array P410 Controller) http://h18000.www1.hp.com/products/quickspecs/13202_div/13202_div.html (Smart Array P411 Controller) http://h18000.www1.hp.com/products/quickspecs/13558_div/13558_div.html (Smart Array P812 Controller) http://h18000.www1.hp.com/products/quickspecs/13200_div/13200_div.html (Smart Array Advanced Pack)	516471-B21
SAS HBA	
HP Modular Smart Array SC08e 2-ports Ext PCIe x8 SAS Host Bus Adapter NOTE: This is a 2 x4 External Port HBA NOTE: This is only approved for the HP P2000 G3 SAS Modular Smart Array. NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18004.www1.hp.com/products/quickspecs/13651_div/13651_div.html (SC08e 6Gb HBA)	614988-B21
SCSI HBA	

Additional Options

	HP SC11Xe Ultra320 Single Channel/ PCIe x4 SCSI Host Bus Adapter NOTE: Recommended HBA for SCSI tape drive connect. NOTE: Please see the following QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/12566_div/12566_div.html (SC11Xe HBA) NOTE: Please refer to the HBA QuickSpecs for additional information at: http://www.hp.com/products/hba.	412911-B21
HP Tape Backup	NOTE: For the complete range of tape drives, autoloaders, libraries and media see: http://www.hp.com/go/tape. For hardware and software compatibility of HP tape backup products see: http://www.hp.com/go/connect. NOTE: Connection using HP Smart Array P212/Zero Memory Controller (PN 462828-B21) recommended.	
	HP DAT 320 USB in 1U Rack-mount Kit	AP835B
	HP 1/8 G2 LTO-4 Ultrium 1760 SAS Tape Autoloader NOTE: Requires HP 1U Tape Autoloader Rack Kit (AH166A) for rack installation.	AK377A
	HP LTO-5 Ultrium 3280 SAS Internal Tape Drive NOTE: For installation into 3U SAS rack kit (AG576B). No peripheral bay available for installation into the server.	EH899A
	HP 1/8 G2 LTO-5 Ultrium 3000 SAS Tape Autoloader NOTE: Requires HP 1U Tape Autoloader Rack Kit (AH166A) for rack installation.	BL536A
	HP MSL2024 1 LTO-4 Ultrium 1760 SAS Tape Library	AK378A
	HP MSL2024 1 LTO-5 Ultrium 3000 SAS Tape Library	BL537A
	HP MSL4048 2 LTO-4 Ultrium 1760 SAS Tape Library	AK380A
	HP MSL4048 2 LTO-5 Ultrium 3000 SAS Tape Library	BL538A
	HP MSL8096 2 LTO-4 Ultrium 1760 SAS Tape Library	AK382A
	HP MSL8096 2 LTO-5 Ultrium 3000 SAS Tape Library	BL539A
HP Disk Backup	NOTE: For the complete range of D2D Backup Systems see: http://www.hp.com/go/d2d. For the complete range of RDX drives and media see: http://www.hp.com/go/rdx. For hardware and software compatibility of HP disk backup products see: http://www.hp.com/go/connect.	
	HP D2D Backup Systems with Backup Data Deduplication	
	HP D2D2504i Backup System NOTE: 3.0TB of useable network disk backup capacity. Network connected appliance with connectivity using the iSCSI protocol. If the server requires a hardware iSCSI initiator, the QLogic QLA4050 Host Bus Adapter is recommended.	EJ002B
	HP StorageWorks D2D4009i Backup System NOTE: 7.5TB of useable network disk backup capacity. Network connected appliance with connectivity using the iSCSI protocol. If the server requires a hardware iSCSI initiator, the QLogic QLA4050 Host Bus Adapter is recommended.	EH939A
	HP D2D4112 Backup System NOTE: 9.0TB (expandable to 18.0TB) of useable network disk backup capacity. Fibre Channel SAN connected appliance. Direct server attach is not supported, requires connection via SAN fabric.	EH993B

Additional Options

	HP RDX Removable Disk Backup Systems USB	
	NOTE: For installation into 1U USB Rack-Mount Kit (A8007A). No peripheral bay available for drive installation into the server.	
	HP StorageWorks RDX500 Internal Removable Disk Backup System	AJ934A
	NOTE: 500GB of disk capacity per data cartridge.	
	HP StorageWorks RDX1000 Internal Removable Disk Backup System	BV847A
	NOTE: For installation into 1U USB Rack-Mount Kit (A8007A). No peripheral bay available for drive installation into the server. 1 TB of disk capacity per data cartridge.	
HP Storage Options	Storage Fibre Channel HBA	
	NOTE: The following is a list of all Fibre Channel Host Bus Adapters for Windows and Linux. For detailed compatibility information please see: http://h18006.www1.hp.com/storage/saninfrastructure/hba.html	
	Brocade Fibre Channel HBAs	
	HP 41B PCIe 4Gb Fibre Channel Single Port Host Bus Adapter	AP767A
	HP 42B PCIe 4Gb Fibre Channel Dual Port Host Bus Adapter	AP768A
	HP 82B PCIe 8Gb Fibre Channel Dual Port Host Bus Adapter	AP770A
	HP 81B PCIe 8Gb Fibre Channel Single Port Host Bus Adapter	AP769A
	Emulex Fibre Channel HBAs	
	HP 81E 8Gb Single Port PCI-e Fibre Channel Host Bus Adapter	AJ762A
	HP 82E 8Gb Dual Port PCI-e Fibre Channel Host Bus Adapter	AJ763A
	HP FC2142SR 4Gb PCIe Host Bus Adapter	A8002A
	HP FC2242SR 4Gb PCIe DC Host Bus Adapter	A8003A
	QLogic Fibre Channel HBAs	
	HP 81Q PCI-e Fibre Channel Host Bus Adapter	AK344A
	HP 82Q 8Gb Dual Port PCI-e Fibre Channel Host Bus Adapter	AJ764A
	HP FC1142SR 4Gb PCIe Host Bus Adapter	AE311A
	HP FC1242SR 4Gb PCIe DC Host Bus Adapter	AE312A
	Storage SCSI HBA	
	HP U320e SCSI Dual Channel Host Bus Adapter	AH627A
	NOTE: Recommended HBA for MSL SCSI Tape Library connect.	
	Converged Network Adapter	
	HP CN1100E Dual Port Converged Network Adapter	BK835A
	HP CN1000E Dual Port Converged Network Adapter	AW520A

Additional Options

HP Disk Storage Systems	MSA SAN Storage Arrays	
	HP MSA70 Array	418800-B21
	NOTE: Please see the QuickSpecs for additional options and configuration information at: http://h18000.www1.hp.com/products/quickspecs/12652_div/12652_div.html	
	Disk Enclosures	
	HP D2600 Disk Enclosure	AJ940A
	HP D2700 Disk Enclosure	AJ941A
	NOTE: Please see the QuickSpecs for additional options and configuration information at: http://h18000.www1.hp.com/products/quickspecs/13404_div/13404_div.html (Worldwide)	
HP Uninterruptible Power Systems	HP Rack-mountable UPS	
	HP R1500 G3 Uninterruptible Power Supply (UPS)	
	HP R1.5kVA G3 1U NA Uninterruptible Power System	AF469A
	HP R1.5kVA G3 1U JP/TW Uninterruptible Power System	AF470A
	HP R1.5kVA G3 1U INTL Uninterruptible Power System	AF471A
	NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14059_div/14059_div.html (Worldwide)	
	HP R/T3000 G2 Uninterruptible Power System (UPS)	
	HP R/T3000 G2 2U L530 Low Voltage NA/JP Uninterruptible Power System	AF466A
	HP R/T3000 G2 2U L620 High Voltage NA/JP Uninterruptible Power System	AF467A
	HP R/T3000 G2 2U Detachable Cord High Voltage INTL Uninterruptible Power System	AF468A
	NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14058_div/14058_div.html (Worldwide)	
	HP Rack-Mountable R5500 UPS	
	HP R5500 6000VA INTL 3U Rackmount Uninterruptible Power System	AF416A
	HP R5500 5000kVA NA/JP 3U Rackmount Uninterruptible Power System	AF426A
	NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/11871_div/11871_div.html (Worldwide)	
	R5000 Uninterruptible Power System (UPS)	
	HP R5KVA 3U IEC309-32A High Voltage INTL Uninterruptible Power System	AF461A
	HP R5KVA 3U L630 High Voltage NA/JP Uninterruptible Power System	AF460A
	NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14109_div/14109_div.html (Worldwide)	
	R7000 Uninterruptible Power System (UPS)	
	HP R7KVA 4U 50A High Voltage NA/JP Uninterruptible Power System	AF462A
	HP R7KVA 4U IEC-32A High Voltage INTL Uninterruptible Power System	AF463A

NOTE: Please see the QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/14110_div/14110_div.html (Worldwide)

NOTE: For additional information on HP Uninterruptible Power Systems please go to: www.hp.com/servers/rackups.

NOTE: For additional information on sizing your server, please reference: http://www.upssizer.com.

NOTE: Please see the UPS and PDU cable matrix's on the HP Power Protection and Management page. Under Power Cords, click on the "HP Power Cord Matrix" link. That link will list cable descriptions, requirements, and specifications for UPS and PDU units. Please see the following link: www.hp.com/products/powercords.

HP Power Distribution Units

HP Monitored Power Distribution Unit: Half Rack Version

HP 4.9kVA 24A Single Input Single Phase NA/JP Monitored Power Distribution Unit	AF914A
HP 7.3kVA 32A Single Input Single Phase INTL Monitored Power Distribution Unit	AF915A

HP Monitored Power Distribution Unit: Full Rack Version

HP 8.6kVA 24A Single Input Three Phase NA/JP Monitored Power Distribution Unit	AF504A
HP 8.3kVA 40A Single Input Single Phase NA/JP Monitored Power Distribution Unit	AF506A
HP 11kVA 16A Single Input Three Phase INTL Monitored Power Distribution Unit	AF508A
HP 7.3kVA 32A Single Input Single Phase INTL Monitored Power Distribution Unit	AF510A

NOTE: Please see the following QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/12118_div/12118_div.html (Worldwide)

Modular Power Distribution Units 1U/0U (Up to 32 outlets)

NOTE: 1U/0U mounting brackets shipped with the unit (optimized for 10000 and 9000 series racks).

HP 4.9kVA 24A High Voltage NA/JP Modular Power Distribution Unit	252663-D72
HP 8.3kVA 40A High Voltage NA/JP Modular Power Distribution Unit	252663-D73
HP 7.3kVA 32A High Voltage INTL Modular Power Distribution Unit	252663-B31
HP 3.6kVA 16A High Voltage INTL Modular Power Distribution Unit	252663-B24

NOTE: This PDU has a detachable input power cord and allows for adaptability to country specific power requirements.

NOTE: Please see the following QuickSpecs for additional options including shorter jumper cables and country specific power cords: http://h18000.www1.hp.com/products/quickspecs/11041_div/11041_div.html (Worldwide)

NOTE: For additional information on HP Power Distribution Units including accessories please go to: www.hp.com/go/pdu.

NOTE: Please see the UPS and PDU cable matrix's on the HP Power Protection and Management page. Under Power Cords, click on the "HP Power Cord Matrix" link. That link will list cable descriptions, requirements, and specifications for UPS and PDU units. Please see the following link: www.hp.com/products/powercords.

Additional Options

HP Intelligent Power Distribution Units (iPDU)	iPDU Core Units	
	HP 4.9kVA 24A Single Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF520A
	HP 8.3kVA 40A Single Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF521A
	HP 8.6kVA 24A Three Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF522A
	HP 14.4kVA 40A Three Phase NA/JP Intelligent Modular Power Distribution Unit	AF533A
	HP 17.3kVA 48A Three Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF523A
	HP 7.3kVA 32A Single Phase INTL Core Intelligent Modular Power Distribution Unit	AF525A
	HP 11kVA 16A Three Phase INTL Core Intelligent Modular Power Distribution Unit	AF526A
	HP 22kVA 32A Three Phase INTL Core Intelligent Modular Power Distribution Unit	AF527A
	HP 11.4kVA 16A 415V Three Phase L22-20 NA/JP Core Intelligent Power Distribution Unit	AF900A
	HP 17.3kVA 24A 415V Three Phase L22-30 NA/JP Core Intelligent Power Distribution Unit	AF902A
	HP 17.3kVA 24A 415V Three Phase IEC309 NA/JP Core Intelligent Power Distribution Unit	AF901A
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13650_div/13650_div.html (Worldwide)	
HP Rack Series	HP Rack 10000 G2 Series (Carbon/Graphite Metallic)	
	HP 10642 G2 Pallet Universal Rack	AF001A
	HP 10642 G2 Shock Universal Rack	AF002A
	HP 10642 G2 1200mm deep Shock Rack	AF092A
	HP 10647 G2 1200mm deep Shock Rack	AF094A
	NOTE: It is mandatory to use a shock pallet when shipping racks with equipment installed. NOTE: Please see the Rack 10000 G2 QuickSpecs for Technical Specifications such as height, width, depth, weight, and color: http://h18000.www1.hp.com/products/quickspecs/12402_div/12402_div.html (Worldwide) NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://www.hp.com/go/rackandpower. NOTE: The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. The 10000 G2 Series Racks provide enhanced airflow for maximum cooling, allowing these racks to be fully loaded with servers using the latest processors. CAUTION: If a third-party rack is used, observe the following additional requirements to ensure adequate airflow and to prevent damage to the equipment: Front and rear doors: If your 42U server rack includes closing front and rear doors, you must allow 830 square inches (5,350 sq cm) of hole evenly distributed from top to bottom to permit adequate airflow (equivalent to the required 64 percent open area for ventilation). Side: The clearance between the installed rack component and the side panels of the rack must be a minimum of 2.75 inches (7 cm). CAUTION: Always use blanking panels to fill all remaining empty front panel U-spaces in the rack. This arrangement ensures proper airflow. Using a rack without	

blanking panels results in improper cooling that can lead to thermal damage.

NOTE: Quick deploy rail system provides tool-free support for racks with square or round mounting holes (including Compaq/HP 7000, 9000, 10000 G2 and HP series), with an adjustment range of 24" - 36". The ambidextrous cable management arm can be mounted on either the left or right side for improved cable management.

HP Intelligent Power Distribution Units (iPDU)

iPDU Core Units

HP 4.9kVA 24A Single Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF520A
HP 8.3kVA 40A Single Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF521A
HP 8.6kVA 24A Three Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF522A
HP 14.4kVA 40A Three Phase NA/JP Intelligent Modular Power Distribution Unit	AF533A
HP 17.3kVA 48A Three Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF523A
HP 7.3kVA 32A Single Phase INTL Core Intelligent Modular Power Distribution Unit	AF525A
HP 11kVA 16A Three Phase INTL Core Intelligent Modular Power Distribution Unit	AF526A
HP 22kVA 32A Three Phase INTL Core Intelligent Modular Power Distribution Unit	AF527A
HP 11.4kVA 16A 415V Three Phase L22-20 NA Core Intelligent Power Distribution Unit	AF900A
HP 17.3kVA 24A 415V Three Phase L22-30 NA Core Intelligent Power Distribution Unit	AF902A
HP 17.3kVA 24A 415V Three Phase IEC309 NA Core Intelligent Power Distribution Unit	AF901A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/13650_div/13650_div.html (Worldwide)

HP Rack Options

Keyboards and Monitors

HP TFT7600 G2 KVM Console Rackmount Keyboard US Monitor	AZ870A
HP TFT7600 G2 KVM Console Rackmount Keyboard UK Monitor	AZ871A
HP TFT7600 G2 KVM Console Rackmount Keyboard DE Monitor	AZ872A
HP TFT7600 G2 KVM Console Rackmount Keyboard FR Monitor	AZ873A
HP TFT7600 G2 KVM Console Rackmount Keyboard IT Monitor	AZ874A
HP TFT7600 G2 KVM Console Rackmount Keyboard ES Monitor	AZ875A
HP TFT7600 G2 KVM Console Rackmount Keyboard DK Monitor	AZ876A
HP TFT7600 G2 KVM Console Rackmount Keyboard NO Monitor	AZ877A
HP TFT7600 G2 KVM Console Rackmount Keyboard SE/FI Monitor	AZ878A
HP TFT7600 G2 KVM Console Rackmount Keyboard CH Monitor	AZ879A
HP TFT7600 G2 KVM Console Rackmount Keyboard PT Monitor	AZ880A
HP TFT7600 G2 KVM Console Rackmount Keyboard BE Monitor	AZ881A
HP TFT7600 G2 KVM Console Rackmount Keyboard JP Monitor	AZ882A
HP TFT7600 G2 KVM Console Rackmount Keyboard RU Monitor	AZ883A
HP TFT7600 G2 KVM Console Rackmount Keyboard Intl Monitor	AZ884A
HP TFT7600 G2 KVM Console Rackmount Keyboard US TAA Monitor	AZ885A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13731_div/13731_div.html (Worldwide)	
HP TFT7600 Rackmount Keyboard 17in US Monitor	AG052A
HP TFT7600 Rackmount Keyboard 17in UK Monitor	AG053A
HP TFT7600 Rackmount Keyboard 17in DE Monitor	AG054A
HP TFT7600 Rackmount Keyboard 17in ES Monitor	AG057A
HP TFT7600 Rackmount Keyboard 17in CH Monitor	AG061A
HP TFT7600 Rackmount Keyboard 17in BE Monitor	AG063A
HP TFT7600 Rackmount Keyboard 17in JP Monitor	AG064A
HP TFT7600 Rackmount Keyboard 17in RU Monitor	AG065A
NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/12417_div/12417_div.html (Worldwide)	
HP 1U US Rackmount Keyboard with USB	AG072A
HP 1U UK Rackmount Keyboard with USB	AG073A
HP 1U DE Rackmount Keyboard with USB	AG074A
HP 1U FR Rackmount Keyboard with USB	AG075A
NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/12465_div/12465_div.html (Worldwide)	
HP Server Console Switches	
HP Server Console 0x2x8 Port Analog Switch	AF616A
HP Server Console 0x2x16 Port Analog Switch	AF617A
NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/11834_div/11834_div.html (Worldwide)	
HP Server Console Switch G2 with Virtual Media & CAC	
HP 0x2x16 KVM Server Console Switch G2 with Virtual Media CAC Software	AF618A
HP 0x2x32 KVM Server Console Switch G2 with Virtual Media CAC Software	AF619A
NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13475_div/13475_div.html (Worldwide)	
HP IP Console Switch G2 with Virtual Media & CAC	
HP 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC Software	AF620A
HP 2x1Ex16 KVM IP Console Switch G2 with Virtual Media CAC Software	AF621A
HP 4x1Ex32 KVM IP Console Switch G2 with Virtual Media CAC Software	AF622A

Additional Options

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
http://h18000.www1.hp.com/products/quickspecs/13474_div/13474_div.html (Worldwide)

HP USB and SD Options	HP USB 2-Button Optical Scroll Mouse	DC172B
	HP USB 04 Standard Keyboard	DT528A#ABA
	HP 4GB Secure Digital High Capacity Flash Media Kit NOTE: Blank SD media device is supported for use with VMware and Citrix. SD media must be installed in the internal slot of the ProLiant server. Learn more at: http://www.hp.com/go/proliantvirtualization.	580387-B21
	HP 2GB USB Flash Media Drive Key Kit NOTE: HP qualified blank USB key for use with HP ProLiant servers that support the VMware virtualization environment and other HP value-add software like SmartStart. HP recommends this industry standard USB flash device for use with VMware ESXi. USB device must be installed in the internal slot of the ProLiant server for use with VMware ESXi. Refer to HP VMware Getting Started Guide for installation instructions.	608447-B21

HP Care Pack Services	Hardware Services On-site Service	
	HP 3 year 4 hour 13x5 ProLiant DL58x Hardware Support	U4607E
	HP 3 year 4 hour 24x7 ProLiant D58x Hardware Support	U4608E
	6-Hour Call to Repair, On-site Service 7-Day x 24-Hour Coverage, 3 Years (U.S. Part Number)	
	HP 3 year 6 hour 24x7 Call to Repair ProLiant DL58x Hardware Support	U4609E
	Installation & Start-up Services	
	HP Install ProLiant DL58x Service	U4617E
	HP Startup ProLiant DL58x Service	U4618E
	HP Installation and Startup for Insight Control Server Deployment - previously Rapid Deployment Pack	U5683E
	Support Plus	
	HP 3 year Support Plus Microsoft ProLiant DL58x Service	U4619E
	Support Plus 24	
	HP 3 year Support Plus 24 Microsoft ProLiant DL58x Service	U4620E
	HP 3 year Support Plus 24 SuSE ProLiant DL58x Service	U6316E
	NOTE: For more information, customer/resellers can contact: http://www.hp.com/services/carepack	

NOTE: Standard memory configurations listed do not apply to "Factory Integrated Models."

HP ProLiant DL585 G7 Models

Memory Configurations

- This server supports DDR3 2GB, 4GB, 8GB, 16GB and 32GB memory modules across 48 memory sockets.
- For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: www.hp.com/go/ddr3memory-configurator

Advanced ECC memory

- Advanced ECC memory is the memory protection mode for this server. In Advanced ECC, the server does not fail because of correctable memory errors. The server provides notification if the level of correctable errors exceeds a pre-defined threshold rate.
- Advanced ECC provides additional protection over standard ECC because it is possible to correct certain memory errors that would otherwise be uncorrectable and result in a server failure.
- Whereas standard ECC can correct single-bit memory errors, Advanced ECC can correct single-bit memory errors and multi-bit memory errors if all failed bits are on the same DRAM device on the memory module.

Online Spare memory

- Online Spare memory mode is a higher level of memory protection that complements Standard Memory mode with Advanced ECC. With Online Spare mode, a DIMM with a rank of memory at least as large as the other ranks in the system, or memory board, is designated as the Online Spare rank. If one of the other DIMMs exceeds a threshold rate of correctable memory errors, the affected rank of memory within that DIMM is taken offline and the data is copied to the Online Spare rank. This capability maintains server availability and memory reliability without service intervention or server interruption. The DIMM that exceeded the error threshold can be replaced at the customer's convenience during a scheduled shutdown. Online Spare reduces the chance of an uncorrectable error bringing down the system; however, it does not fully protect the system against uncorrectable memory errors.
- Online Spare mode is beneficial to businesses with sites that do not have IT staff available to service a failure, do not always have replacement memory readily available, or cannot bring down the server until a scheduled shutdown. The cost of implementation for Online Spare over Advanced ECC is the hardware cost of the extra DIMMs for the spare memory bank.
- The user configures the system for Online Spare mode through the RBSU. Online Spare configuration requirements vary for each server series, but it does not require operating system support or special software beyond the System BIOS. However, if messaging and logging are desired at the console along with messages in HP Systems Insight Manager, an operating system must be used that has system management and agent support for Advanced Memory Protection.

Population order

- The two tables below represent the memory module population order for one processor. The population order for the other processors is identical. SR denotes Single Rank, DR denotes Dual Rank, and QR denotes Quad Rank.
- All memory modules must follow the population order shown in these two tables for all the processors with the following exception:
- QR memory modules must be installed only in memory sockets 2, 5, 8, and 11, while following the population order for those memory sockets.

Memory

Processor memory socket	1	2	3	4	5	6
Rank support per memory socket	SR/DR	SR/DR/QR	SR/DR	SR/DR	SR/DR/QR	SR/DR
Population order	A	I	E	C	K	G
Processor memory channel	A	A	A	B	B	B
Processor memory socket	7	8	9	10	11	12
Rank support per memory socket	SR/DR	SR/DR/QR	SR/DR	SR/DR	SR/DR/QR	SR/DR
Population order	B	J	F	D	L	H
Processor memory channel	C	C	C	D	D	D

Population rules

- When installing memory modules, observe the following population rules:
- Use only HP memory modules listed in this document.
- Advanced ECC is not available if x4 and x8 memory modules are mixed in channels (A and B), (C and D), or both, but standard ECC is still available. Advanced ECC is available if x4 and x8 memory modules are mixed in memory channels (A and C), (B and D), or both.

While adhering to the memory population rules ("Population rules" - see above), performance can be improved by following the guidelines below:

- Memory modules may be installed one at a time per processor, but installing two at a time per processor provides for additional performance, installing four at a time per processor provides for better performance, and installing equal amounts of memory for all processors provides for best performance.
- Install all memory modules of the same speed on the same processor for best performance.
- Install all memory modules of the same voltage on the same processor for best power.

Advanced Memory Protection (AMP) mode Online Spare Memory has further requirements beyond these listed above. Please refer to the user guide for additional memory configuration requirements

Memory bus speed
Depending on the quantity and native speed of memory modules installed, memory bus speeds can be 1333 MHz, 1066 MHz, 800 MHz, or 667 MHz. Memory bus speeds can be different for each processor.

To determine memory bus speeds, do the following:
Within RBSU, select the Power Management Options menu > Advanced Power Management Options menu > Maximum Memory Bus Frequency menu.

Memory

Memory modules per channel	QR	SR or DR	Memory module native speed	Memory bus speed (standard-voltage memory module	Memory bus speed (low-voltage memory module)
1		1	SR 1333 MHz DR 1333 MHz DR 1066 MHz	1333 MHz[1]	1066 MHz[1]
1	1		QR 1066 MHz	1066 MHz[1]	1066 MHz[1]
2		2	SR 1333 MHz DR 1333 MHz DR 1066 MHz	1333 MHz[1,2]	1066 MHz[1,2]
2	1	1	SR 1333 MHz DR 1333 MHz DR 1066 MHz QR 1066 MHz	800 MHz	800 MHz
3		3 SR	SR 1333 MHz	1066 MHz	1066 MHz
3		3 DR	DR 1333 MHz DR 1066 MHz	1066 MHz	800 MHz
3		3 mixed	SR 1333 MHz DR 1333 MHz DR 1066 MHz	1066 MHz	800 MHz
3	1	2	SR 1333 MHz DR 1333 MHz DR 1066 MHz QR 1066 MHz	800 MHz	667 MHz

[1]Max. Actual result of lowest DIMM speed
[2]When 1333MHz selected in BIOS "memory speed with 2DPC" entry

Select one of the following menu options:

- Auto (default) - The memory bus speed is set to what is shown in the following table. If the native speed of the installed memory module is slower than the memory bus speed, the memory bus speed is set to the memory module native speed
- 800 MHz-The memory bus speed is set to 800 MHz regardless of the quantity of memory modules installed, unless the table above reflects a slower memory bus speed.
  NOTE: There may be more than one memory bus speed menu option.
  NOTE: LVDIMMs support on 2011.08.04 BIOS

Memory

Memory Installation Example

These memory installation example shows the memory sockets associated with the first processor only. This can be applied toward the memory sockets associated with the other processor also.

4 RDIMMs per processor

- Standard memory: 4x4GB RDIMMs (16GB per processor)
- Optional memory: Adding 8x8GB RDIMMs to standard memory (80GB per processor)
- Maximum memory: Replacing standard memory with 4x16GB QR RDIMMs and 8x8GB DR RDIMMs (maximum of 128GB per processor)

Processor memory socket	1	2	3	4	5	6
Standard Memory	4GB			4GB		
Optional Memory	4GB	8GB	8GB	4GB	8GB	8GB
Maximum Memory	16GB	32GB	16GB	16GB	32GB	16GB

Processor memory socket	7	8	9	10	11	12
Standard Memory	4GB			4GB		
Optional Memory	4GB	8GB	8GB	4GB	8GB	8GB
Maximum Memory	16GB	32GB	16GB	16GB	32GB	16GB

NOTE: 1TB capacity is achieved by loading 1 32GB in center socket and remaining sockets with 16GB DIMMs on every memory channel on all processors.

The following memory options are available from HP:

Memory

NOTE: DIMM banks are active only when the corresponding processor socket is populated.

Registered DIMMs (RDIMMs)

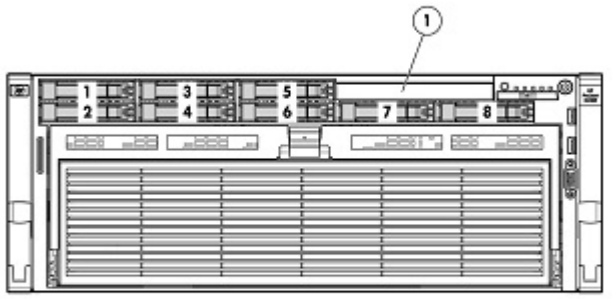
HP 2GB (1x2GB) Dual Rank x8 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	593907-B21
HP 4GB (1x4GB) Single Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	593911-B21
HP 4GB (1x4GB) Single Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit	604500-B21
HP 8GB (1x8GB) Dual Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	593913-B21
HP 8GB (1x8GB) Dual Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit	604502-B21
HP 16GB (1x16GB) Quad Rank x4 PC3-8500 (DDR3-1066) Registered CAS-7 Memory Kit	593915-B21
HP 16GB (1x16GB) Dual Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 LP Memory Kit	627808-B21
HP 32GB (1x32GB) Quad Rank x4 PC3L-8500 (DDR3-1066) Registered CAS-7 LP Memory Kit	627810-B21

NOTE: Memory must be installed in like-pairs, i.e. two of the same size.

Upgrade Options

HP DL585 G7 CPU Memory Secondary Upgrade Option NOTE: Adds processor sockets 3 and 4 and associated DIMM slots.	590489-B21

1-8 Eight SFF SAS hot plug hard drive bays



Drive Support

	Quantity Supported	Position Supported	Controller
Removable Media			
Slimline DVD-ROM drive	Up to 1	1	Integrated SATA
HP Slim SATA DVD RW Optical Drive	Up to 1	1	Integrated SATA

Hard Drives

NOTE: The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.

NOTE: Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

SAS Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives

	Quantity Supported	Position Supported	Controller
900GB 6G SAS 10K 600GB 6G SAS 10K 450GB 6G SAS 10K 300GB 6G SAS 10K 146GB 6G SAS 15K 72GB 6G SAS 15K	Up to 8	1-8	HP Smart Array P212/Zero Memory Controller HP Smart Array P212/256 MB Controller HP Smart Array P410/256 MB Controller HP Smart Array P410/512 MB BBWC Controller HP Smart Array P410/Zero Memory Controller HP Smart Array P410/512 MB FBWC Controller HP Smart Array P410/1G FBWC Controller HP Smart Array P411/256 MB Controller HP Smart Array P411/512 MB BBWC Controller HP Smart Array P411/1G Flash Backed Write Cache HP Smart Array P411/512MB Flash Backed Write Cache

			HP Smart Array P812/512 BBWC Controller

SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives

	Quantity Supported	Position Supported	Controller
1TB 6G SAS 7.2K 500GB 6G SAS 7.2K	Up to 8	1-8	HP Smart Array P212/Zero Memory Controller HP Smart Array P212/256 MB Controller HP Smart Array P410/256 MB Controller HP Smart Array P410/512 MB BBWC Controller HP Smart Array P410/Zero Memory Controller HP Smart Array P410/512 MB FBWC Controller HP Smart Array P410/1G FBWC Controller HP Smart Array P411/256 MB Controller HP Smart Array P411/512 MB BBWC Controller HP Smart Array P411/1G Flash Backed Write Cache HP Smart Array P411/512MB Flash Backed Write Cache HP Smart Array P812/512 BBWC Controller

SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives

	Quantity Supported	Position Supported	Controller
1TB 3G SATA 7.2K 500GB 3G SATA 7.2K 160GB 3G SATA 7.2K	Up to 8	1-8	HP Smart Array P212/Zero Memory Controller HP Smart Array P212/256 MB Controller HP Smart Array P410/256 MB Controller HP Smart Array P410/512 MB BBWC Controller HP Smart Array P410/Zero Memory Controller HP Smart Array P410/512 MB FBWC Controller HP Smart Array P410/1G FBWC Controller HP Smart Array P411/256 MB Controller HP Smart Array P411/512 MB BBWC Controller HP Smart Array P411/1G Flash Backed Write Cache HP Smart Array P411/512MB Flash Backed Write Cache HP Smart Array P812/512 BBWC Controller

SATA Hot Plug 2.5" Enterprise Mainstream Solid State Drives

	Quantity Supported	Position Supported	Controller
400GB 3.0G SATA SSD 200GB 3.0G SATA SSD 120GB 3.0G SATA SSD 100GB 3.0G SATA SSD 60GB 3.0G SATA SSD	Up to 8	1-8	HP Smart Array P212/Zero Memory Controller HP Smart Array P212/256 MB Controller HP Smart Array P410/256 MB Controller HP Smart Array P410/512 MB BBWC Controller HP Smart Array P410/Zero Memory Controller HP Smart Array P410/512 MB FBWC Controller HP Smart Array P410/1G FBWC Controller HP Smart Array P411/256 MB Controller HP Smart Array P411/512 MB BBWC Controller HP Smart Array P411/1G Flash Backed Write Cache HP Smart Array P411/512MB Flash Backed Write Cache

			HP Smart Array P812/512 BBWC Controller

6G SAS Hot Plug Enterprise Performance Solid State Drives

	Quantity Supported	Position Supported	Controller
400GB 6G SAS SLC SFF 200GB 6G SAS SLC SFF	Up to 8	1-8	HP Smart Array P212/Zero Memory Controller HP Smart Array P212/256 MB Controller HP Smart Array P410/256 MB Controller HP Smart Array P410/512 MB BBWC Controller HP Smart Array P410/Zero Memory Controller HP Smart Array P410/512 MB FBWC Controller HP Smart Array P410/1G FBWC Controller HP Smart Array P411/256 MB Controller HP Smart Array P411/512 MB BBWC Controller HP Smart Array P411/1G Flash Backed Write Cache HP Smart Array P411/512MB Flash Backed Write Cache HP Smart Array P812/512 BBWC Controller

6G SAS Hot Plug Enterprise Mainstream Solid State Drives

	Quantity Supported	Position Supported	Controller
800GB 6G SAS MLC SFF 400GB 6G SAS MLC SFF 200GB 6G SAS MLC SFF	Up to 8	1-8	HP Smart Array P212/Zero Memory Controller HP Smart Array P212/256 MB Controller HP Smart Array P410/256 MB Controller HP Smart Array P410/512 MB BBWC Controller HP Smart Array P410/Zero Memory Controller HP Smart Array P410/512 MB FBWC Controller HP Smart Array P410/1G FBWC Controller HP Smart Array P411/256 MB Controller HP Smart Array P411/512 MB BBWC Controller HP Smart Array P411/1G Flash Backed Write Cache HP Smart Array P411/512MB Flash Backed Write Cache HP Smart Array P812/512 BBWC Controller

Storage

External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
70 Modular Smart Array	Up to 2	External	HP Smart Array P211/256 MB Controller
	Up to 4	External	HP Smart Array P411/256 MB Controller HP Smart Array P411/512 MB BBWC Controller HP Smart Array P411/1G Flash Backed Write Cache Controller HP Smart Array P812/1G Flash Backed Cache Controller
D2600 Disk Enclosure	Up to 4	External	HP Smart Array P211/256 MB Controller
	Up to 8	External	HP Smart Array P411/256MB BBWC Controller HP Smart Array P411/512 MB BBWC Controller HP Smart Array P411/1G Flash Backed Write Cache Controller HP Smart Array P812/1G Flash Backed Cache Controller
D2700 Disk Enclosure	Up to 2	External	HP Smart Array P211/256 MB Controller
	Up to 4	External	HP Smart Array P411/256 MB Controller HP Smart Array P411/512 MB BBWC Controller HP Smart Array P411/1G Flash Backed Write Cache Controller HP Smart Array P812/1G Flash Backed Cache Controller

Maximum Storage Capacity - (External Enclosures Attached)

Internal	8TB (8 x 1TB SFF SAS/SATA Drives)
External	192TB (8 D2600 enclosures @ 12 drives per enclosure x 2TB SATA)
Total	200TB

Maximum Storage Capacity - (External Enclosures Attached)

Internal	8TB (8 x 1TB SFF SAS/SATA Drives)
External	100TB (4 D2700 enclosures @ 25 drives per enclosure x 1TB SATA)
Total	108TB

Tape and Disk-Based Backup

NOTE: For the complete range of tape drives, autoloaders, libraries and media, including the internal fitting models, see: http://www.hp.com/go/tape. For the complete range of D2D Backup Systems see: http://www.hp.com/go/d2d. For the complete range of \RDX drives and media see: http://www.hp.com/go/rdx. For hardware and software compatibility of HP disk and tape backup products see: http://www.hp.com/go/connect.

	Position Supported	Controller	Controller Part Number
HP SCSI Tape Drives LTO-1 Ultrium 232 LTO-2 Ultrium 448 LTO-3 Ultrium 920 LTO-3 Ultrium 960 LTO4 Ultrium 1760 LTO-4 Ultrium 1840 DAT 40 DAT 72	External	HP SC11Xe Ultra320 Single Channel/ PCIe x4 SCSI Host Bus Adapter NOTE: Please check the full compatibility information at: http://www.hp.com/go/connect	412911-B21

Storage

DAT 160 1U Rack-Mount Kit 3U Rack-Mount Kit			
HP USB Tape Drives DAT 40 DAT 72 DAT 160 DAT 320 1U USB Rack-Mount Kit	External	USB 2.0 Port	N/A
HP SAS Tape Drives DAT 160 DAT 320 LTO-2 Ultrium 448 LTO-3 Ultrium 920 LTO-4 Ultrium 1760 LTO-4 Ultrium 1840 LTO-5 Ultrium 3000 LTO-5 Ultrium 3280 1U Rack-Mount Kit 3U Rack-Mount Kit	External	HP Smart Array P212/ZM 1-ports Int/1-ports Ext PCIe x8 SAS Controller NOTE: Please check the full compatibility information at: http://www.hp.com/go/connect	462828-B21
HP SCSI Tape Autoloaders DAT 72x10 Autoloader 1/8 G2 Autoloader	External	HP SC11Xe Ultra320 Single Channel/ PCIe x4 SCSI Host Bus Adapter NOTE: Please check the full compatibility information at: http://www.hp.com/go/connect	412911-B21
HP SCSI Tape Libraries, External MSL2024 MSL4048 MSL8096 MSL6000	External	HP U320e SCSI Dual Channel Host Bus Adapter NOTE: Please check the full compatibility information at: http://www.hp.com/go/connect	AH627A
HP SAS Tape Autoloaders and Libraries 1/8 G2 Autoloader MSL2024 MSL4048 MSL8096	External	HP Smart Array P212/ZM 1-ports Int/1-ports Ext PCIe x8 SAS Controller NOTE: Please check the full compatibility information at: http://www.hp.com/go/connect	462828-B21
HP Fibre Channel Tape Libraries MSL2024 MSL4048 MSL8096 MSL6000	External	Please consult the EBS connectivity matrix at: http://www.hp.com/go/ebs for connectivity information and the supported Fibre Channel HBAs shown in this QuickSpecs.	N/A

Storage

HP USB RDX Removable Disk Backup System RDX160 RDX320 RDX500 RDX750 RDX1TB	External	USB 2.0 Port	N/A
HP D2D Backup Systems, iSCSI D2D2503i D2D4004i	External	Embedded Network Controller. If the server requires a hardware iSCSI initiator, the QLogic QLA4050 Host Bus Adapter is recommended.	N/A
HP D2D Backup Systems, Fibre Channel D2D4000fc	External	Direct server attach is not supported, requires connection via SAN fabric. See: http://www.hp.com/go/connect	N/A

Power Specifications

HP 1200W Common Slot Silver Hot Plug Power Supply Kit							
Part Number	500172-B21						
Input Voltage Range (Vrms)	100 to 240						
Frequency Range (Nominal) (Hz)	50/60						
Nominal Input Voltage (Vrms)	100	120	200	208	220	230	240
Maximum Rated Output Wattage Rating	800	900	1200	1200	1200	1200	1200
Nominal Input Current (A rms)	9.7	9.0	7.0	6.8	6.4	9.1	5.9
Maximum Rated Input Wattage Rating (Watts)	930	1034	1348	1348	1348	1348	1348
Maximum Rated VA (Volt-Amp)	970	1079	1406	1406	1406	1406	1406
Efficiency (%)	86	87	89	89	89	89	89
Power Factor	0.97						
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Maximum Inrush Current (A peak)	30						
Maximum Inrush Current duration (mS)	20						
Maximum British Thermal Unit Rating (BTU-Hr)	3174	3530	4600	4600	4600	4600	4600

HP 1200W Common Slot Platinum Hot Plug Power Supply Kit							
Part Number	578322-B21						
Input Voltage Range (Vrms)	100 to 240						
Frequency Range (Nominal) (Hz)	50/60						
Nominal Input Voltage (Vrms)	100	120	200	208	220	230	240
Maximum Rated Output Wattage Rating	800	900	1200	1200	1200	1200	1200
Nominal Input Current (A rms)	9.3	8.6	6.7	6.5	6.1	5.8	5.6
Maximum Rated Input Wattage Rating (Watts)	889	989	1290	1290	1290	1290	1290
Maximum Rated VA (Volt-Amp)	927	1031	1345	1345	1345	1345	1345
Efficiency (%)	90	91	93	93	93	93	93
Power Factor	0.97						
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Maximum Inrush Current (A peak)	30						
Maximum Inrush Current duration (mS)	20						
Maximum British Thermal Unit Rating (BTU-Hr)	3033	3375	4403	4403	4403	4403	4403

NOTE: To review typical system power ratings use the HP Power Advisor which is available online located at url: www.hp.com/go/proliant-energy-efficient or www.hp.com/go/hppoweradvisor

Power Specifications

System Unit	**Dimensions** (H x W x D) (with bezel)	6.94" x 19.0" x 27.55" (17.6cm x 48.3cm x 70.0cm)	
	Weight (approximate)	Maximum (all hard drives, power supplies, DIMMs and processors installed)	100.0 lb (45.4 kg)
		Minimum (one hard drive, two power supplies, four DIMMs and two processors installed)	66.0 lb (30.0 kg)
	Input Requirements (per power supply)	Rated Line Voltage	100 - 127 VAC, 200 - 240 VAC
		Rated Input Current	12 A (at 100 VAC), 8 A (at 200 VAC)
		Rated Input Frequency	50 to 60 Hz
		Rated Input Power	1161 W (at 100 VAC), 1598 W (at 240 VAC)
	BTU Rating	Maximum	3960 BTU/hr (at 100 VAC), 5450 BTU/hr (at 200 VAC)
	Power Specifications	NOTE: To review typical system power ratings use the HP Power Advisor which is available online located at url: www.hp.com/go/proliant-energy-efficient or www.hp.com/go/hppoweradvisor • Click on the system of interest. Example: DL585 G7 • Follow the instructions of the next screens	
	Power Supply Output (per power supply)	Rated Steady-State Power	910 W (low line), 1300 W (high line)
		Maximum Peak Power	910 W (low line), 1300 W (high line)
	System Inlet Temperature	Operating	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).
		Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
	Relative Humidity (non-condensing)	Operating	10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.
		Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.

	Altitude	Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
		Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Acoustic Noise	Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).	
		Idle	
		L WAd	6.8 B (with PCI-E)
		L pAm	NA dBA
		Operating	
		L WAd	6.8 B (with PCI-E)
		L pAm	NA dBA
	Emissions Classification (EMC)	FCC Rating	Class A
		Normative Standards	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1
		NOTE: Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.	
Integrated Lights-Out 3 (iLO 3) integrated on system board	Architecture	PCI Express based health and remote management ASIC	
	Processor	PCI Express RISC processor core running at 250MHz	
	Upgradeability	Option firmware upgradeable via Flash ROM.	
	Interfaces	One Ethernet Sideband connection (10/100/1000 Mb/s)	
		One Ethernet network connection (10/100Mb/s)	
	Memory	128-MB RAM with ECC	
	Operating System Support	Microsoft Windows 2008 R2	
		Microsoft Windows 2008 (32 bit and 64 bit)	
		Microsoft Windows Server 2008 Standard Edition (32bit and 64bit)	
		Microsoft Windows Server 2008 Enterprise Edition (32bit and 64bit)	
		Microsoft Windows Server 2003 and Windows Server 2003 R2, and Windows Server 2003 for Extended Systems Standard Edition, Enterprise Edition	
		Red Hat Enterprise Linux 5 (32 bit and 64 bit)	
		SUSE Linux Enterprise Server 11 (32bit and 64bit)	
		SUSE Linux Enterprise Server 10 (32bit and 64bit)	
		VMware ESX 4.0	

		VMware ESX 3.5.0
	Client System Support	Microsoft Windows 7
		Microsoft Windows XP Professional Edition
		Microsoft Windows Vista Business and Ultimate Editions
		Red Hat Enterprise Desktop 5.00
		SUSE Linux Enterprise Desktop 11
		SUSE Linux Enterprise Desktop 10
	Client Browser Support	Microsoft Internet Explorer 8
		Microsoft Internet Explorer 7
		Microsoft Internet Explorer 6
		Firefox 3.5 (on supported Windows and Linux systems)
		Firefox 3.0 (on supported Windows and Linux systems)
	Command Line Support	Secure Shell and serial port access
		Secure Socket Layer
		Secure Shell version 2
	Security	Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser, CLP and XML scripting interface
		AES encryption of video
		RC4 encryption of video
	Directory Support Services	Active Directory v1.0 (Windows 2003)
	Driver Support	HP ProLiant iLO3 Management Controller Driver Package
	Management protocols supported	SNMP, IPMI 2.0 (system and LAN interface), DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP), HP RIBCL XML
Smart Array P410i Controller	Dimensions	Embedded
	Disk Drive and Enclosure Interface - Transfer rate	6Gb/s SAS (Serial Attached SCSI) 3Gb/s SATA (Serial ATA)
	SAS Connectors	2 internal 4X connectors
	Cache Memory Speed	DDR2-800MHz with 40 or 72-bit wide bus
	Server Interface	x4 PCIe 2.0 provides 2GB/s maximum bandwidth
	SAS Speed	8 6Gb/s SAS links provide 4.8GB/s maximum bandwidth
	Cache Memory	Zero Memory RAID has no cache memory 40-bit 256MB ECC protected cache (battery upgrade available) 72-bit 512MB BBWC or 72-bit 512MB and 1G FBWC
	Logical Drives Supported	Zero Memory, Up to 2 logical volumes (8 physical drives) Up to 64 logical drives with cache
	Host Memory Addressing	64-bit, supporting greater than 4GB server memory space
	RAID Support	RAID 6, 6+0 (Advanced Data Guarding) NOTE: RAID 6, 6+0 can be enabled with one of the following combinations: • 256 MB cache, Battery kit and Smart Array Advanced Pack License key option upgrades

		• 512 MB BBWC/FBWC and Smart Array Advanced Pack License key option upgrades • 1G FBWC and Smart Array Advanced Pack License key option upgrades RAID 5, 5+0 (Distributed Data Guarding) NOTE: A minimum or 256 MB cache is required to enable RAID 5, 5+0 support RAID 1+0 (Striping & Mirroring) RAID 0 (Striping), RAID 1 (Mirroring)
HP NC375i Integrated Quad Port Gigabit Server Adapter	Network Interface	10/100/1000-T
	Compatibility	IEEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX IEEE 802.3ad 1000Base-TX IEEE 802.1p 100Base-TX IEEE 802.1q 100Base-TX
	Data Transfer Method	PCI Express 2.0 x8
	Controller	Qlogic/NetXen NX3031
	Network Transfer Rate	10Base-T (Full-Duplex) 20 Mb/s 100Base-TX (Full-Duplex) 200 Mb/s 1000Base-TX (Full-Duplex) 2000 Mb/s
	Connector	RJ-45
	Cable Support	10Base-T Categories 3, 4, or 5 UTP; up to 328 ft (100 m) 10/100/1000 Base-TX Category 5 UTP up to 328 ft (100 m)
Environment-friendly Products and Approach	End-of-life Management and Recycling	Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: http://www.hp.com/go/green. To recycle your product, please go to: http://www.hp.com/go/green or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/green. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

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For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less.